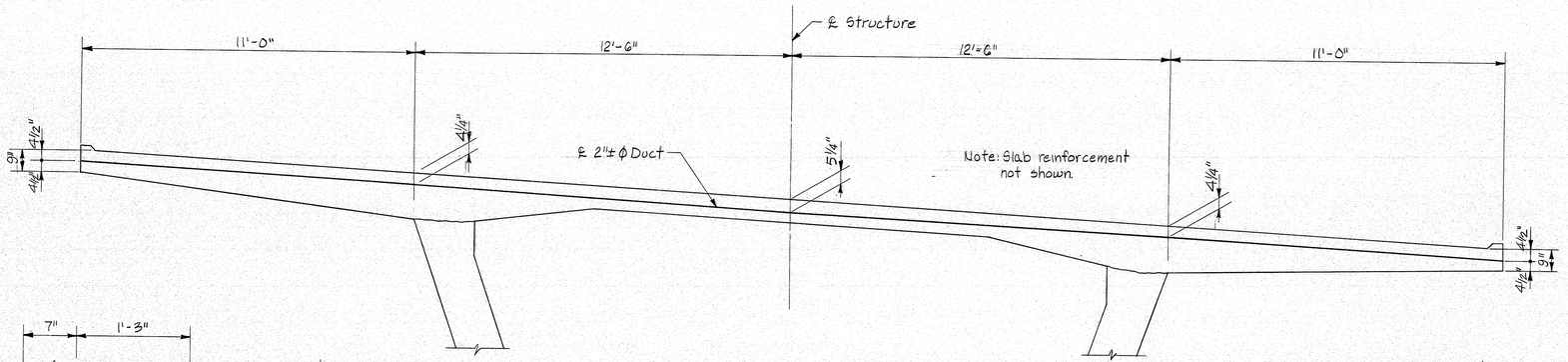
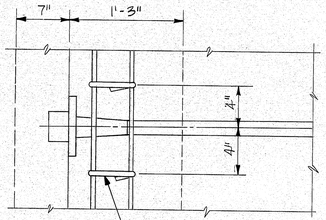
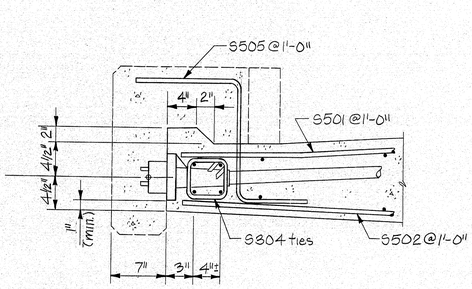
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	489	515





PLAN
(Typ, slab reinf. not shown)



SECTION

STRESSING ANCHOR DETAILS

1 0 1

TRANSVERSE PRESTRESS OFFSETS

1 0 1 2

PRESTRESSING NOTES:

1. Tendons shall be stressed to 0.75f's. Longitudinal tendons and slab tendons shall be anchored at an equivalent anchor set of 1/4". No allowance has been made for anchor set of transverse tendons in pier caps.
2. Friction coefficents used in design are $\mu = 0.25$; $K = 0.0002$.
3. Tendon data is as follows:

Location	Direction	Tendon No.	Tendon Size	Duct Dia.
Slab	Transverse	—	4-0.6"ϕ	2"
Pier Caps	"	—	29-0.6"ϕ	5 1/2"
Abut. Diaph.	"	—	19-0.6"ϕ	4 5/16"
Girders-Span 1	Long.	T1, T2 & T3	24-0.6"ϕ	5"
Girders-Span 2	"	T4, T5 & T6	31-0.6"ϕ	5 1/2"
Girders-Span 3	"	T7 & T8	16-0.6"ϕ	3 15/16"
Girders-Spans 1-3	"	T9	31-0.6"ϕ	5 1/2"

4. All tendons shall be stressed from one end except tendon T9, which is to be stressed from both ends.
5. After all prestressing and grouting operations are completed, the blockout closure reinforcement shall be bent into place over the anchor and the blockouts filled with non-shrink grout.
6. Adequate vents shall be provided at all anchorages and at properly located intervals not exceeding 75 feet.

Notes:
1. Transverse tendons are radial, except near Abutment 1. For the layout see sheet 15.
2. Offsets shown are to ℄ 2"± ducts.
3. Tendons consist of 4-0.6"ϕ Strands.
4. Tendons to be stressed at alternate ends, except as noted in 6.
5. For tendon spacing see sheets 15 & 16.
6. Slab tendons shall be tensioned to 0.75f's except the splayed tendons (10 tendons) near Abut. 1 which shall be tensioned to 0.70f's from the right (east) end only.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	BSV	2/86
	CHECKED	BSV	
	REVISIONS		
	FIELD CHANGES		

DRAWING 44-132-4710-1

102-227

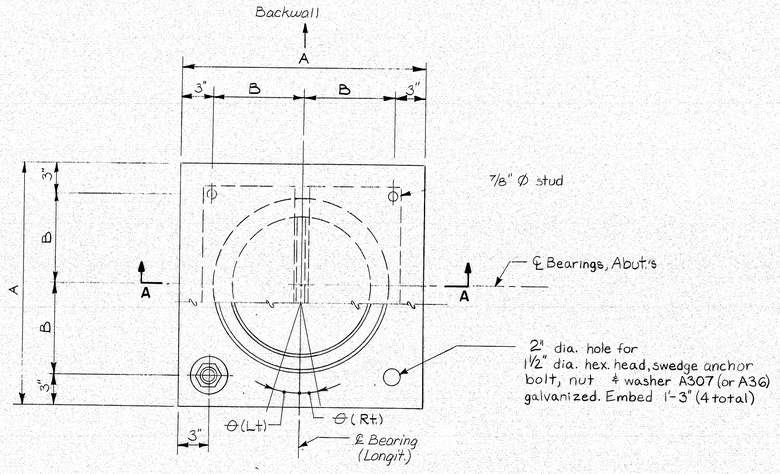
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

TOP SLAB PRESTRESSING

SHEET 29 OF 55 AUGUSTA, MAINE

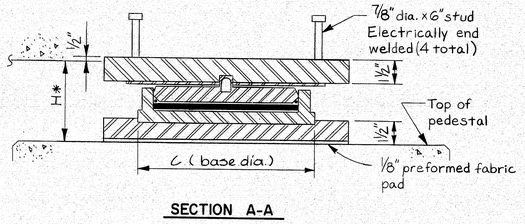
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	490	515



PLAN

(Looking Toward Backwall)

Note 1
Plan of top plate and keyway is shown for ∡Θ = 0°. Install top plate and keyway aligned in accordance with ∡Θ shown in table.

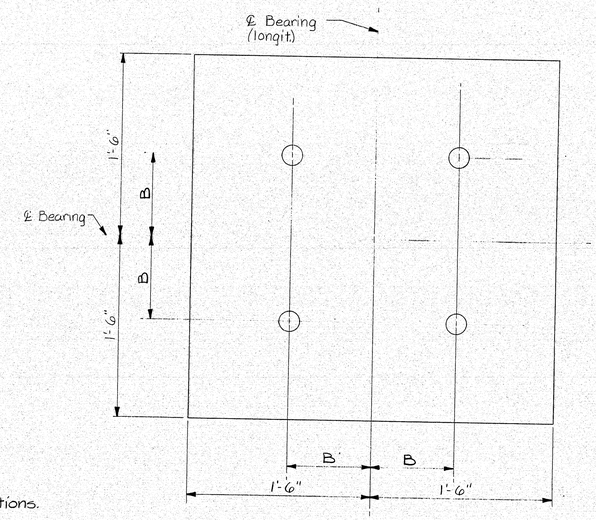


SECTION A-A

* If final dimension varies from that shown, the top of pedestal elevation will require adjustment.

LATERALLY RESTRAINED BEARING

Not to Scale



PEDESTAL PLAN & ANCHOR BOLT LAYOUT

Notes:
1. For makeup of pot bearings shown, including pot, elastomer, seals, TFE, and stainless steel surfaces, see specifications.
2. Dimensions may vary to meet manufacturers standard, except that size and thickness of top and bottom plates shall not be reduced.
3. Preformed fabric pads shall conform to sub section 713.08
4. Bearings shall be installed, in accordance with sub section 504.45, as applicable. Percussion drilling of anchor bolt holes (if drilled) will not be permitted.
5. The hold-down requirements as stated in the Special Provisions, Section 523 may be omitted.

Location	No. Bearings	A (inches)	B (inches)	C (inches)	H (inches)	Min. Vert. Load per Bearing (Dead Load) (Kips)	Max. Vert. Load per Bearing (Dead & Live Load) (Kips)	Max. Lateral Load (Kips)	Movement Rating (inches)	Angle Θ
Abut. 1	2	28 3/8	11 3/16	21 5/8	6	660	790	80	1.500	19° Lt.
Abut. 2	2	24 1/2	9 1/4	18 7/8	6	480	600	60	1.000	14° Rt.

ΔΘ indicates direction of Bearing movement and alignment of keyway.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

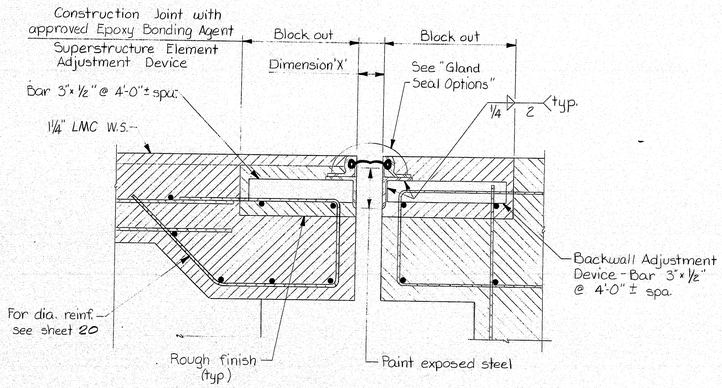
BEARING DETAILS

SHEET 30 OF 55 AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	BSM	11/88
CHECKED	AG	
REVISIONS	RC	
FIELD CHANGES		

BRUNING 44-132 45710-1

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	491	513

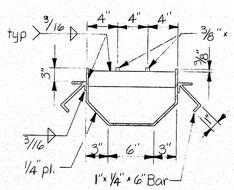


EXPANSION JOINT - GLAND SEAL

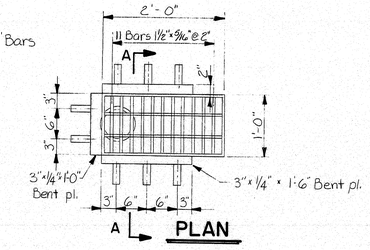
2-Req'd

Notes:

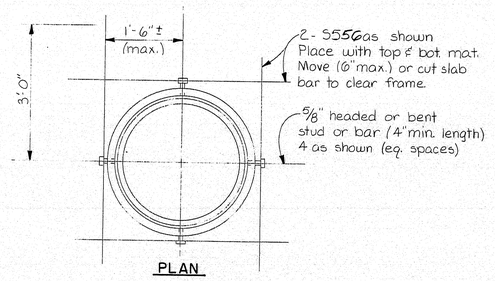
1. For dimension 'X' see Gland Seal Setting Table for 3" total movement - Standard Detail dwg. BD 124-81.
2. For additional notes see dwg. BD 124-81



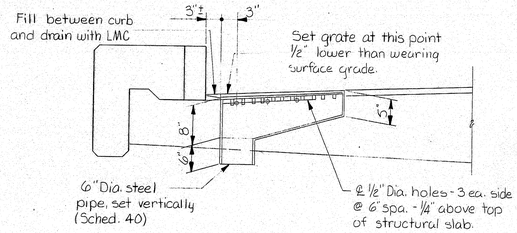
SECTION A-A



PLAN



PLAN

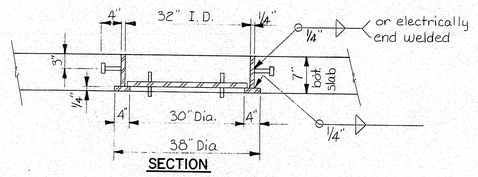


BRIDGE DRAIN

4-Req'd

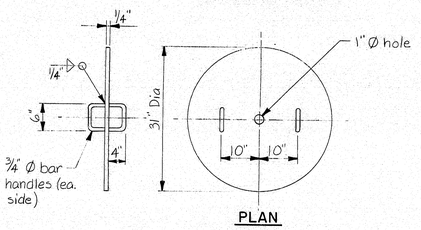
Notes:

1. Drain locations are as follows: Sta. 241+50 ±, 243+90 ±, 244+40 ± & 244+95 ± Adjust locations to clear transverse deck tendons.
2. See Standard Details dwg. BD126-81, Bridge Drain, for additional notes.



SECTION

FRAME DETAILS



PLAN

LID DETAILS

ACCESS MANHOLE

3 required - ¼" plate A-36, Galvanize after fabrication.

Weight of assembly: 175 lbs. each.

For location, see Sheet 13

102-229

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	ASA	2/82
CHECKED	RC	
REVISIONS		
FIELD CHANGES		

BRUNING 44-132-45710-1

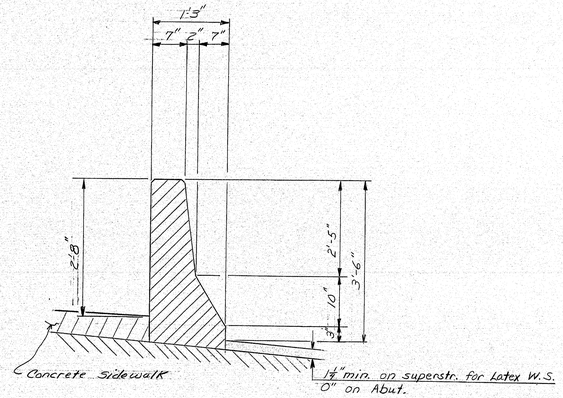
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

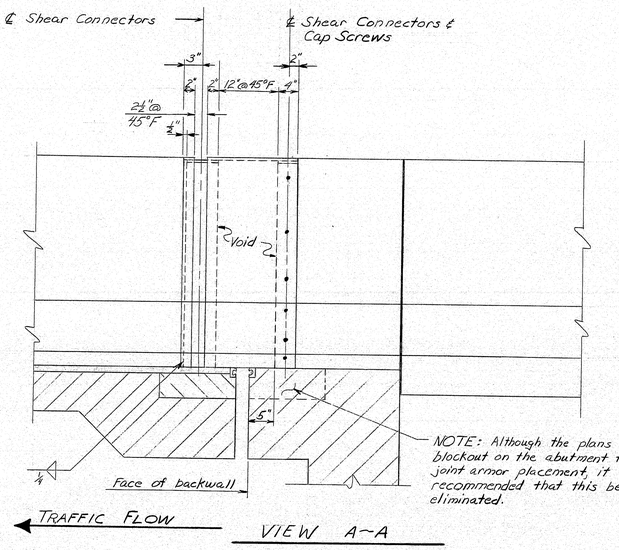
MISCELLANEOUS DETAILS

SHEET 31 OF 55 AUGUSTA, MAINE

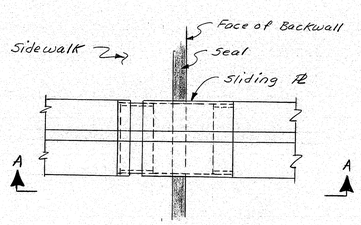
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)SR	491A	515



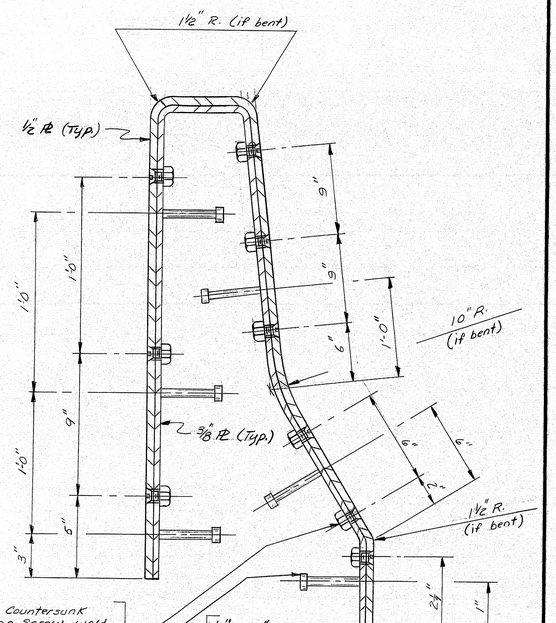
PEDESTRIAN BARRIER
(Concrete dimensions)



VIEW A-A



PLAN PEDESTRIAN BARRIER



PEDESTRIAN BARRIER
BENT Pl OPTION

NOTE:

Except as shown, outside dimensions shall conform to permanent concrete barrier shown above. Plates may be bent, welded or both. ASTM A36 Steel Galvanized.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	NLS	7-87
	CHECKED	WLB	
	REVISIONS		
	FIELD CHANGES		

BRUNING 44-132-45710-1

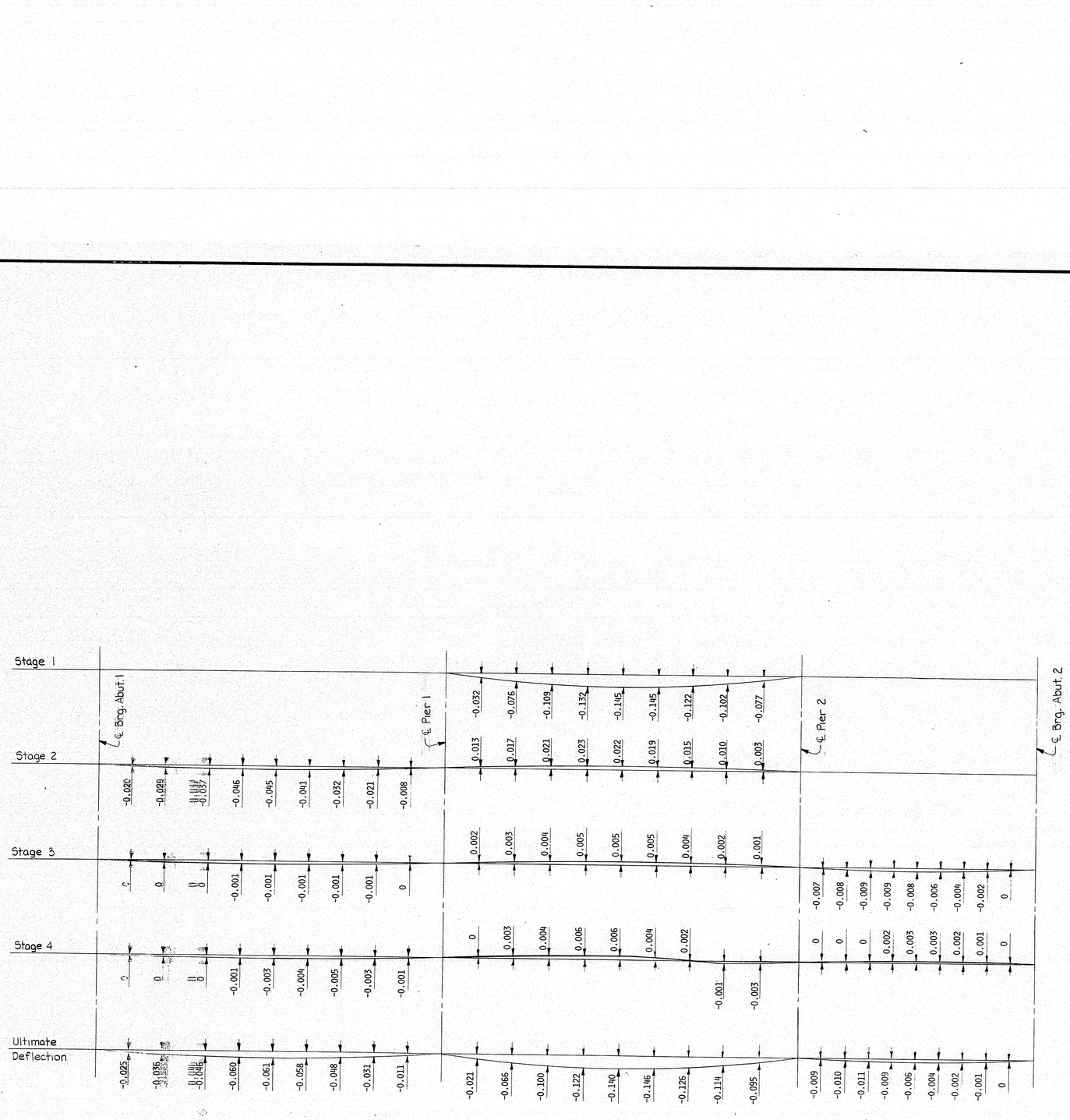
102-230

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 INTERCHANGE COMPLEX
WASHINGTON AVE. S.B. RAMP
OVER
INTERSTATE 295
IN THE TOWN OF
PORTLAND
CUMBERLAND COUNTY
BARRIER EXPANSION DAM

SHEET 31A OF 55 AUGUSTA, MAINE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-295-3(100)S	492	516



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS FIELD CHANGES		

BRUNING 44-132 45710-1

Data on this sheet replaces similar data shown on sheet 32 of 55.

102.231

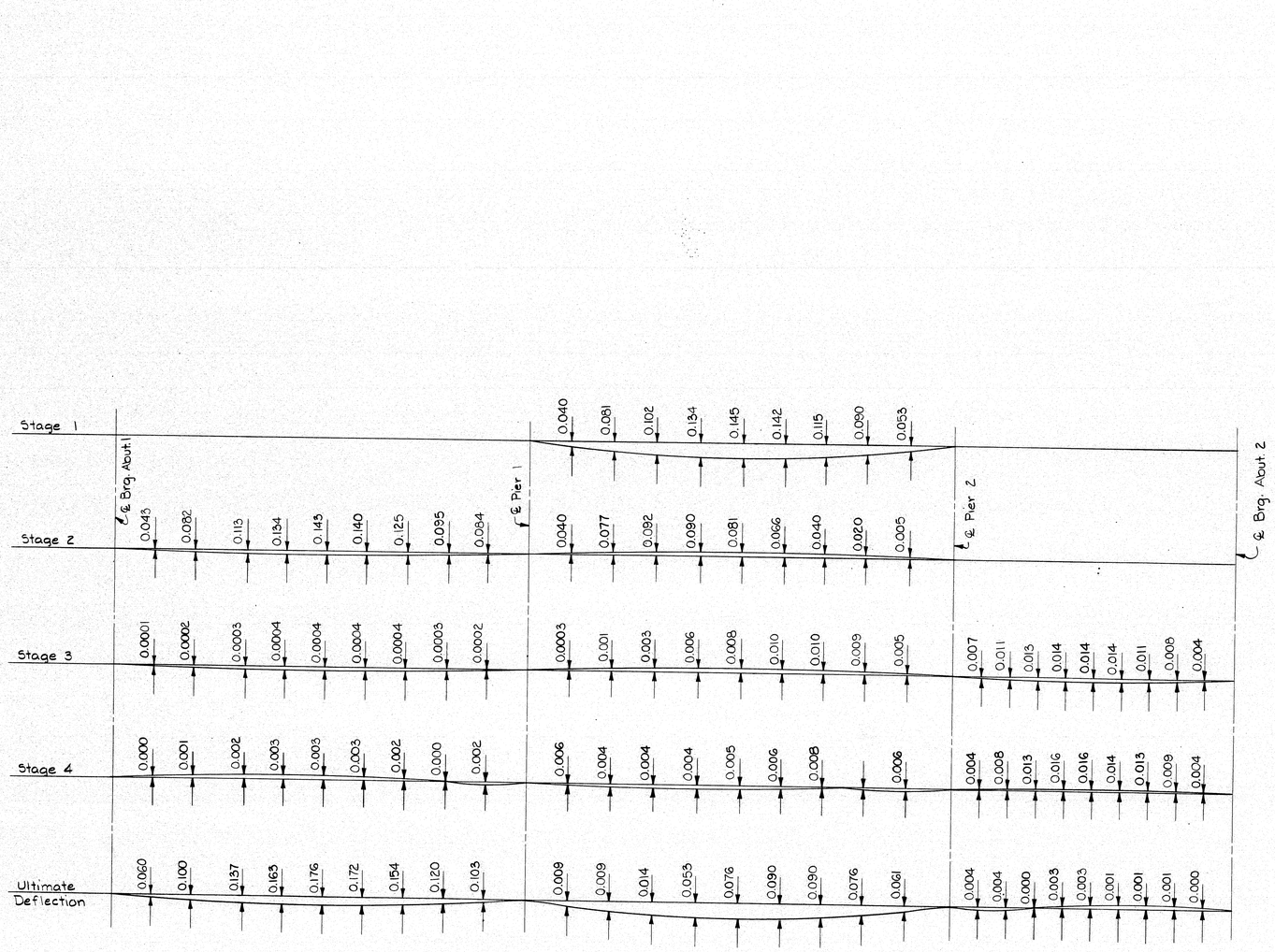
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

CONSTRUCTION SEQUENCE AND CAMBER DIAGRAM

SHEET 32A OF 55 AUGUSTA, MAINE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE			



Data on this sheet replaces 32A and similar data shown on sheet 32 of 55.

102-232

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I - 295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

CONSTRUCTION SEQUENCE AND CAMBER DIAGRAM

SHEET 32B OF 55 AUGUSTA, MAINE APRIL 1988

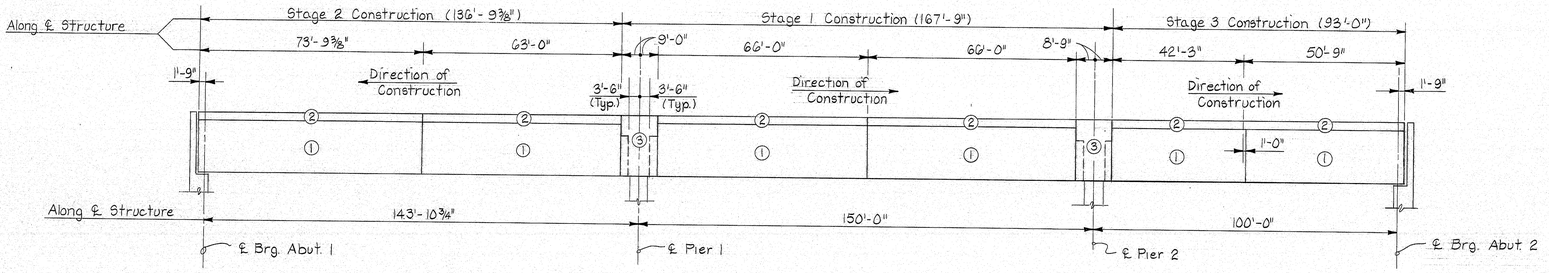
PROJECT DESIGN ENGINEER

PLANS

	BY	DATE
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

BRUNING 44-132-457101

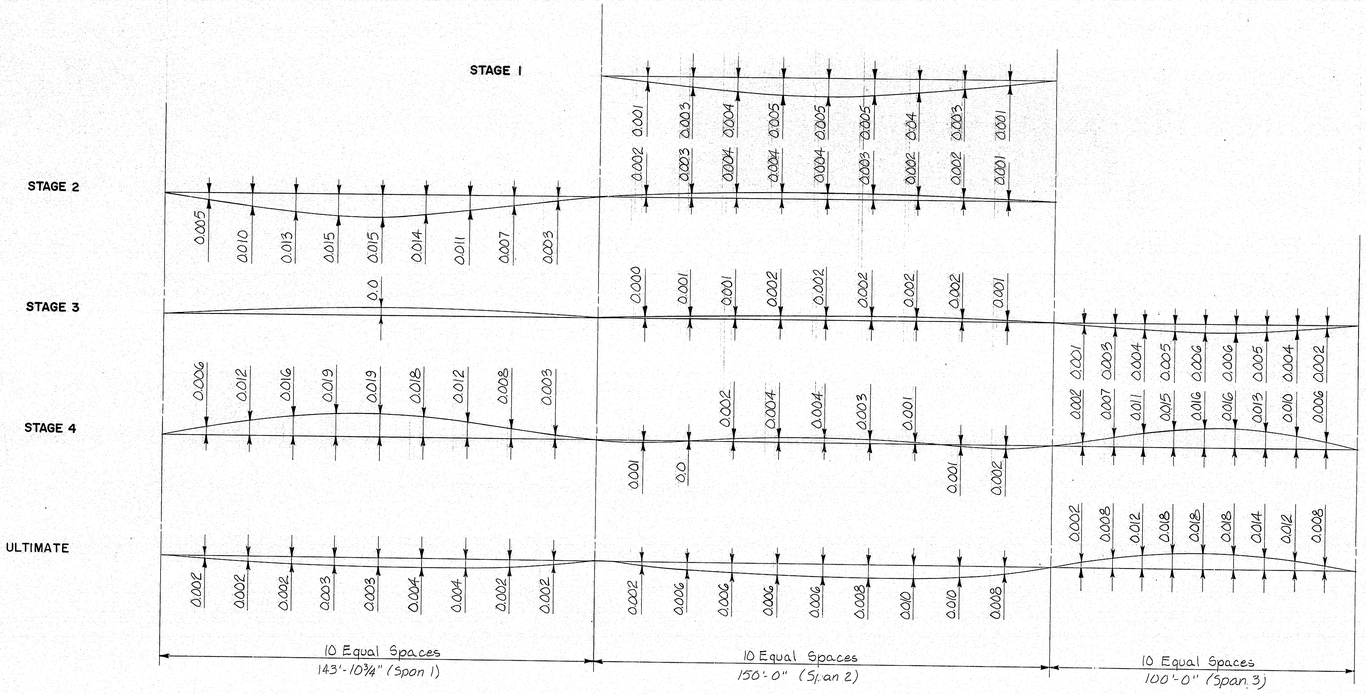
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	492	515



SUPERSTRUCTURE CONSTRUCTION SEQUENCE

Superstructure Construction Sequence.

1. Stage Construction shall proceed in a numerical sequence as indicated on the plans.
2. Numbers ① thru ③ indicate basic sequence of placing superstructure concrete for each stage.
3. Transverse deck prestressing to be completed before any falsework is removed for that portion.
4. Longitudinal prestressing to be done for each stage *only* after all transverse prestressing is completed for that stage. Longitudinal stressing sequence shall be arranged to minimize eccentric conditions.
5. Main falsework for each stage (1 thru 3) shall remain in place until all longitudinal prestressing for that stage is completed.



GIRDER DEFLECTIONS - FEET

Camber Notes:

1. Values shown are approximate deflections due to dead load and prestress.
2. Stage 1 thru Stage 4 values are initial deflections for each stage immediately after stressing. Values do not include effects of preceding stages.
3. Stage 4 deflection is due to continuous prestressing between abutments plus effects of superimposed dead loads.
4. Ultimate deflections include the effects of all four stages, including time effects.
5. Falsework is to be cambered for ultimate deflection values plus any anticipated falsework settlement and vertical curve effects.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	EST	12/85
CHECKED	EST	
REVISIONS	ECA	
FIELD CHANGES		

BRUNING 44-132-4971D-1

102-233

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

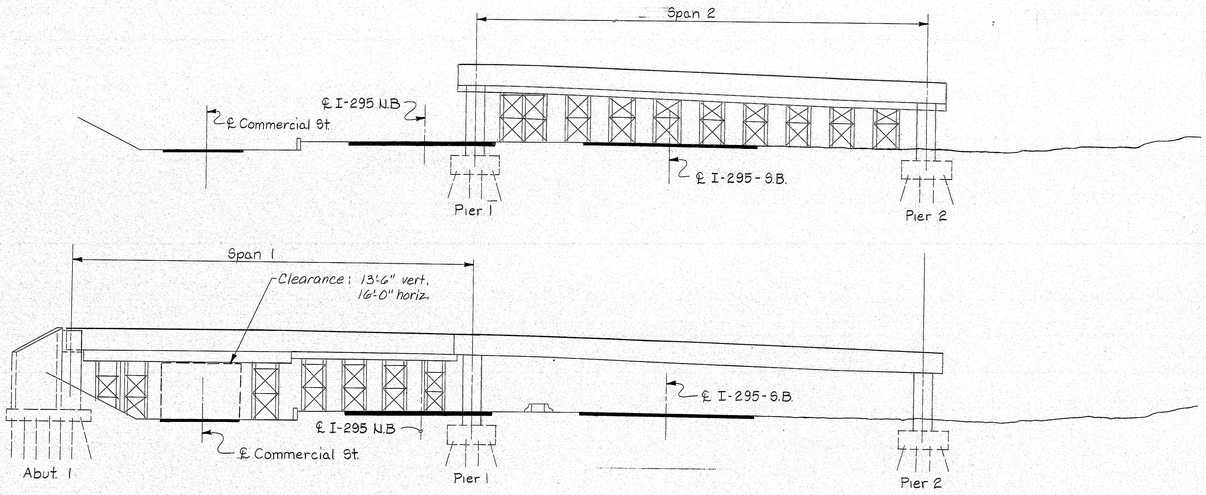
I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

CONSTRUCTION SEQUENCE AND CAMBER DIAGRAM

SHEET 32 OF 55 AUGUSTA, MAINE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	493	515

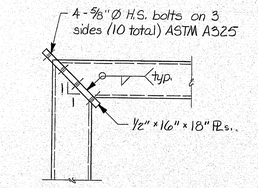
Note: Construction stages shown for bridge differ from construction phases shown on highway plans. Sequence is the same.



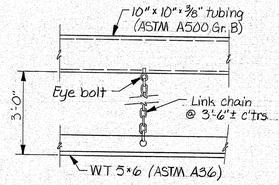
CONSTRUCTION STAGES

Stage 1
a. Construct piers 1 & 2.
b. Construct span 2.

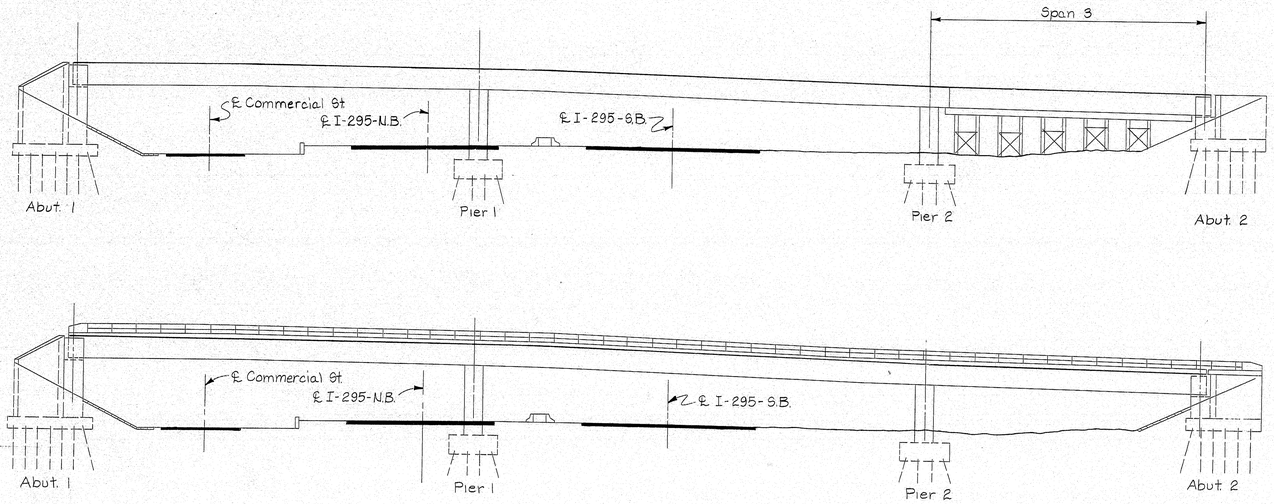
Stage 2
a. Construct abut. 1. & wingwalls
b. Construct span 1.



DETAIL A



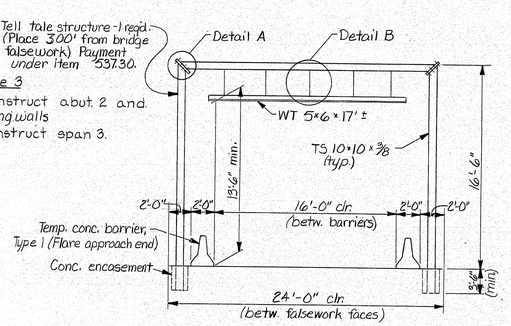
DETAIL B



ELEVATION

Tell tale structure - 1 req'd. (Place 3.00' from bridge falsework) Payment under item 537.30.

Stage 3
a. Construct abut. 2 and wing walls
b. Construct span 3.



Stage 4
a. Continuous Post-tensioning Spans 1-4.
b. Place curbs and bridge rail.

CONSTRUCTION CLEARANCES COMMERCIAL STREET

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

CONSTRUCTION STAGES

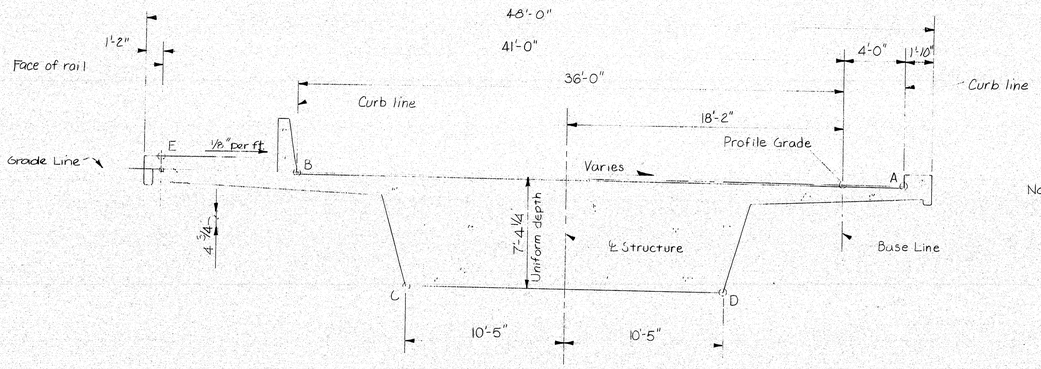
102-234

SHEET 33 OF 55 AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS		
DESIGN - DETAILED	BSH	12/82
CHECKED	AG	
REVISIONS	RC	
FIELD CHANGES		

BRUNING 44-132-45710-1

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	494	515



Note: Deck elevations are at top of wearing surface.

TRANSVERSE SECTION

SIDEWALK, BRIDGE DECK AND SOFFIT ELEVATIONS

STATION	ELEVATION					
	PROFILE GRADE	A	B	C	D	E
241+20.00	43.09	—	—	—	—	44.48
241+30.00	43.23	—	44.06	36.61	—	44.68
241+40.00	43.36	43.24	44.33	36.87	36.24	45.00
241+50.00	43.49	43.35	44.60	37.13	36.41	45.31
241+60.00	43.61	43.46	44.87	37.38	36.56	45.62
241+70.00	43.71	43.54	45.11	37.61	36.70	45.90
241+80.00	43.79	43.60	45.33	37.81	36.81	46.16
241+90.00	43.85	43.64	45.53	37.99	36.90	46.40
242+00.00	43.88	43.65	45.70	38.15	36.97	46.61
242+10.00	43.89	43.66	45.72	38.17	36.98	46.62
242+20.00	43.88	43.65	45.70	38.16	36.97	46.61
242+30.00	43.85	43.62	45.67	38.12	36.93	46.58
242+40.00	43.79	43.56	45.62	38.07	37.06	46.52
242+50.00	43.72	43.49	45.54	37.99	36.80	46.45
242+60.00	43.62	43.39	45.44	37.89	36.70	46.35
242+70.00	43.50	43.27	45.32	37.77	36.58	46.23
242+80.00	43.35	43.12	45.18	37.63	36.44	46.08
242+90.00	43.19	42.96	45.01	37.46	36.27	45.92
243+00.00	43.00	42.77	44.82	37.28	36.09	45.73
243+10.00	42.79	42.56	44.61	37.07	35.88	45.52

STATION	ELEVATION					
	PROFILE GRADE	A	B	C	D	E
243+20.00	42.56	42.33	44.38	36.83	36.65	45.29
243+30.00	42.31	42.08	44.13	36.58	35.39	45.04
243+40.00	42.03	41.80	43.85	36.31	35.12	44.76
243+50.00	41.73	41.50	43.56	36.01	34.82	44.46
243+60.00	41.41	41.19	43.24	35.69	34.50	44.15
243+70.00	41.07	40.84	42.90	35.35	34.16	43.80
243+80.00	40.71	40.48	42.53	34.98	33.79	43.44
243+90.00	40.32	40.09	42.15	34.60	33.41	43.05
244+00.00	39.91	39.69	41.74	34.19	33.00	42.65
244+10.00	39.50	39.27	41.33	33.78	32.59	42.23
244+20.00	39.10	38.88	40.93	33.38	32.19	41.84
244+30.00	38.72	38.49	40.55	33.00	31.81	41.45
244+40.00	38.35	38.13	40.78	32.63	31.44	41.09
244+50.00	38.00	37.77	39.82	32.27	31.09	40.73
244+60.00	37.66	37.45	39.34	31.81	30.71	40.21
244+70.00	37.33	37.14	38.88	31.36	30.35	39.71
244+80.00	37.02	36.85	38.43	30.92	30.01	39.22
244+90.00	36.73	36.57	37.99	30.50	29.68	38.74
245+00.00	36.44	36.31	37.51	30.05	29.35	38.21
245+08.00	36.24	36.11	37.26	29.79	29.13	37.94

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	BSA	AG
CHECKED	RC	
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132-6571-0-1

102-235

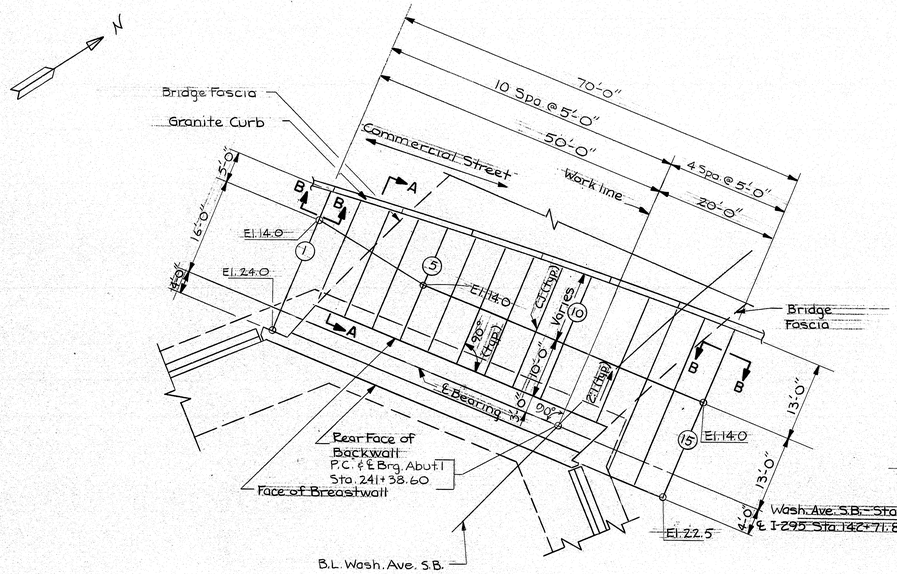
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

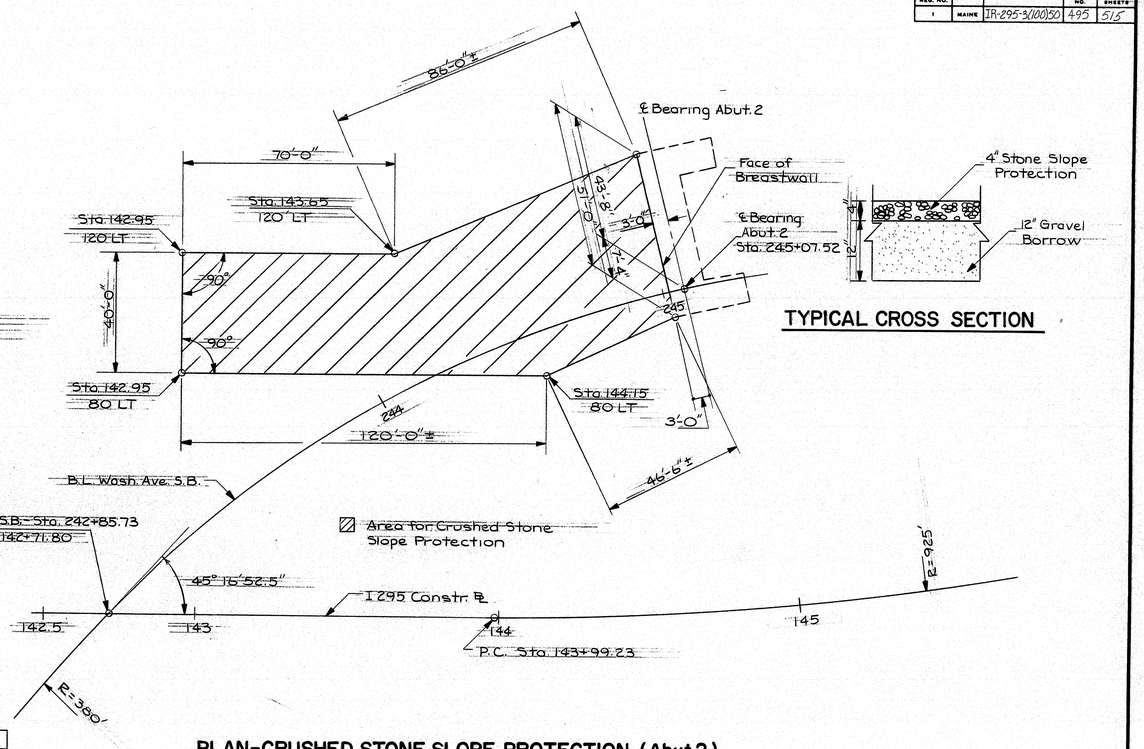
DECK AND SOFFIT ELEVATIONS

SHEET 34 OF 38 AUGUSTA, MAINE

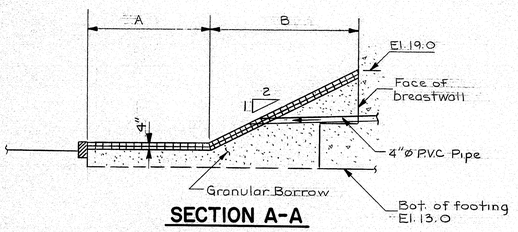
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	495	515



PLAN-CONCRETE SLOPE PROTECTION (Abut.1)



PLAN-CRUSHED STONE SLOPE PROTECTION (Abut.2)

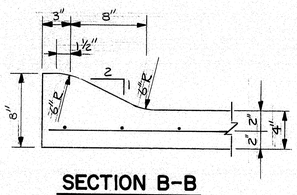


SECTION A-A

Notes: Break bond between construction joints by a method approved by the Engineer.

Reinforce with 6×6 - W1.4 × W1.4 welded wire fabric not to pass through construction joints. (CJ.)

Concrete for slope protection shall be Class Y.



SECTION B-B

WASH. AVE. S.B. RAMP ABUTMENT NO. 1			
LINE	A	B	
1	5'-0"	20'-0"	
2	6'-6"	15'-0"	
3	7'-9"	12'-0"	
4	8'-11"	11'-0"	
5	10'-0"	10'-0"	
6	10'-6"	10'-0"	
7	10'-10"	10'-0"	
8	11'-2"	10'-0"	
9	11'-6"	10'-0"	
10	11'-10"	10'-0"	
11	12'-1"	10'-0"	
12	12'-4"	10'-0"	
13	12'-8"	17'-0"	
14	13'-0"	17'-0"	
15	13'-0"	17'-0"	

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	BSA	
	CHECKED	SLC	
	REVISIONS	RC	
	FIELD CHANGES		

BRUNING 44-132-67101

102-236

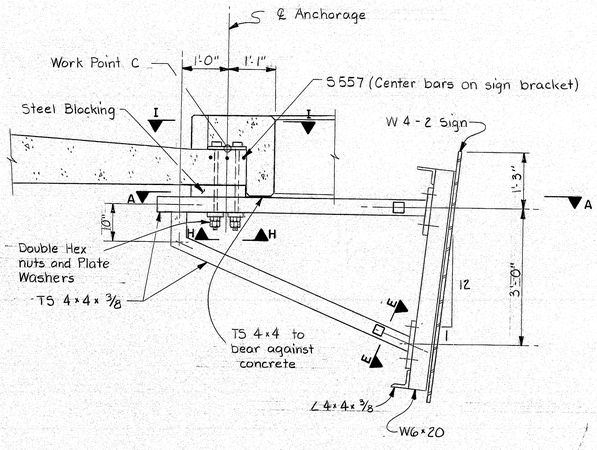
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 – PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

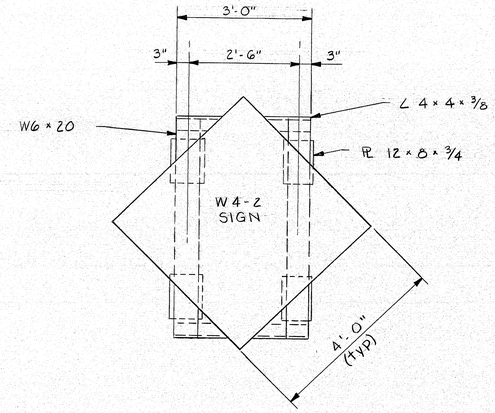
SLOPE PROTECTION

SHEET 35 OF 55 AUGUSTA, MAINE

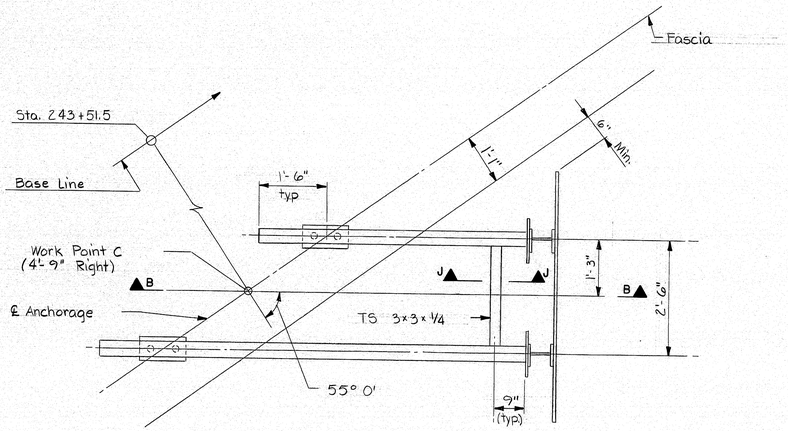
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	496	515



BRACKET ELEVATION
(SECTION B-B)



ELEVATION



SECTION A-A

Notes:
1. For sign bracket notes see sht 39.
2. TS denotes structural tubing
3. For sign location see sht 2.
4. Epoxy Coat anchor bolt in deck and web
5. For sections E-E, H-H, I-I & J-J see sht. 39.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	BSI	10-87
	CHECKED	AS	
	REVISIONS		
	FIELD CHANGES		

BRUNING 44-132-49710-1

102-237

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

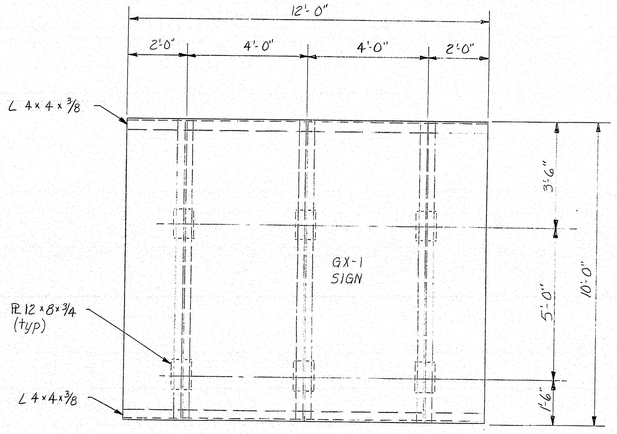
I - 295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SIGN BRACKET

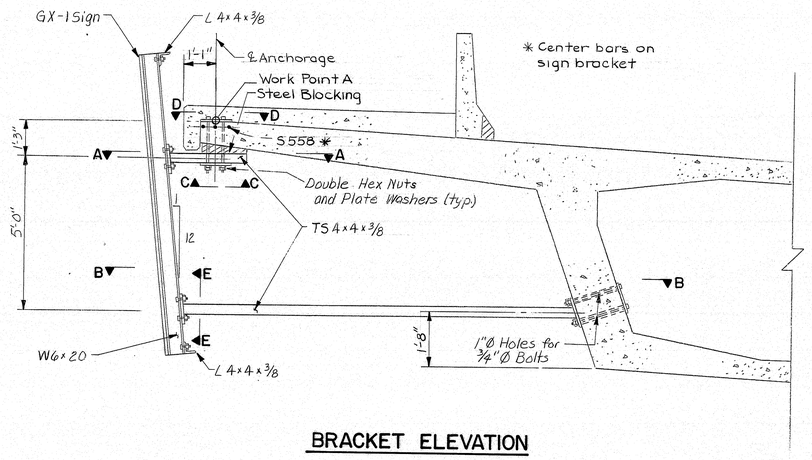
Scale: 3/4" = 1'-0"
Revised 10 - 87

SHEET 36 OF 55 AUGUSTA, MAINE

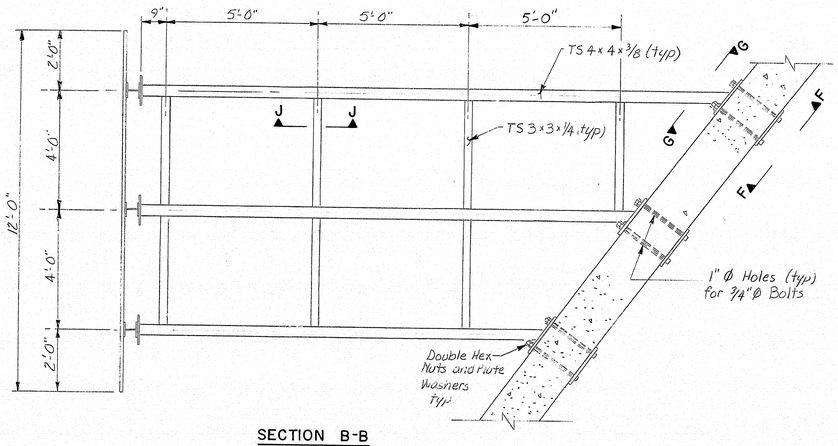
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	497	515



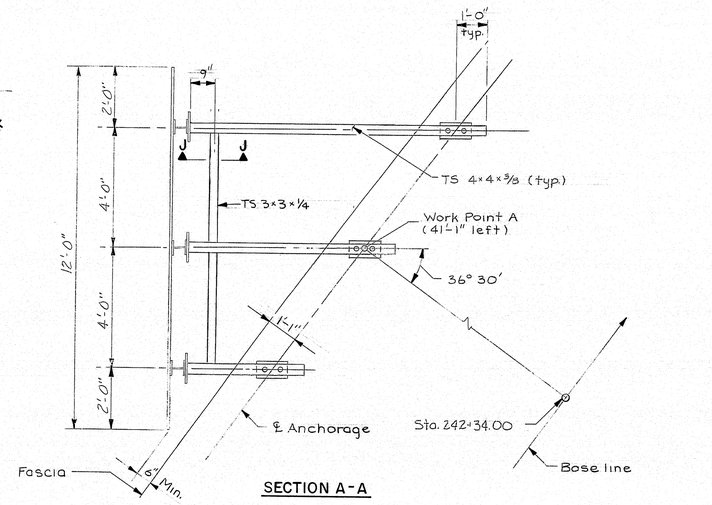
ELEVATION



BRACKET ELEVATION



SECTION B-B



SECTION A-A

Notes:
For sign bracket notes see sht. 39.
For additional notes see sht. 36.
For sections C-C, D-D, E-E, F-F, G-G, & J-J See sht. 39.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	TH	
CHECKED	ESH	
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132-6710-1

102-238

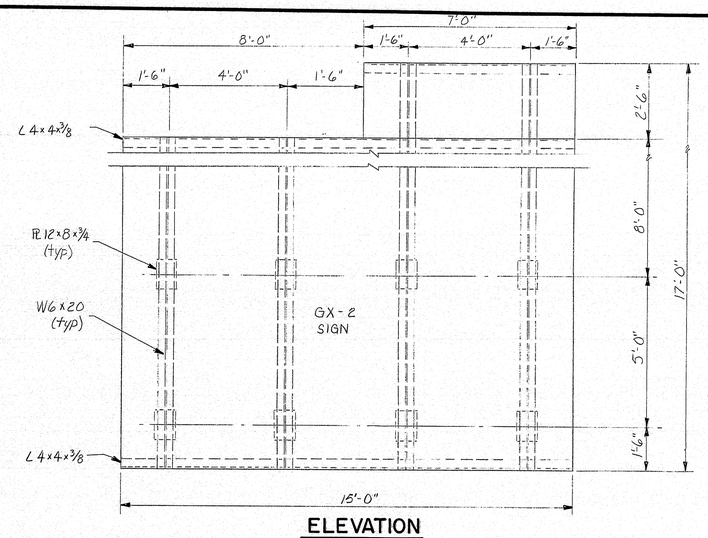
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

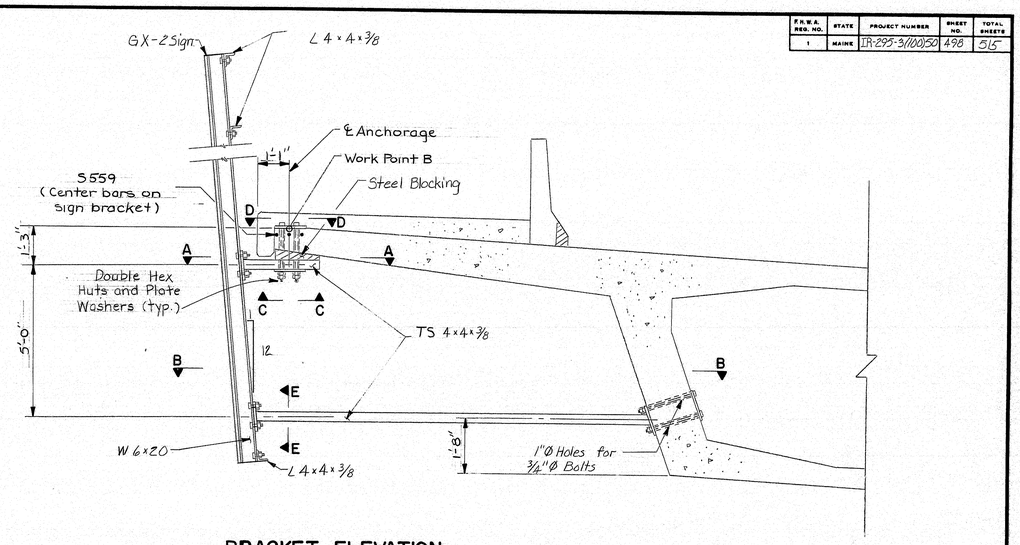
SIGN BRACKET

SHEET 37 OF 55 AUGUSTA, MAINE

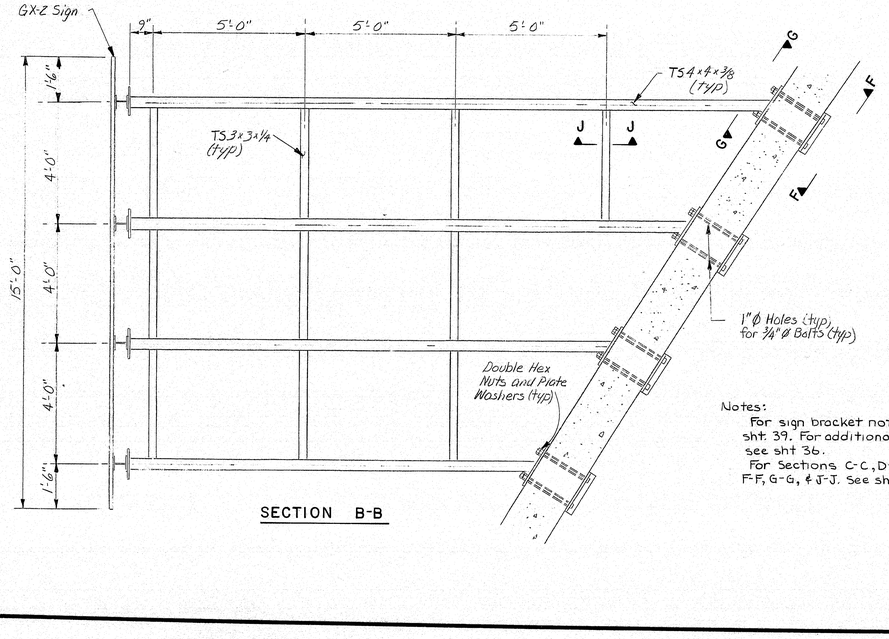
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	498	515



ELEVATION

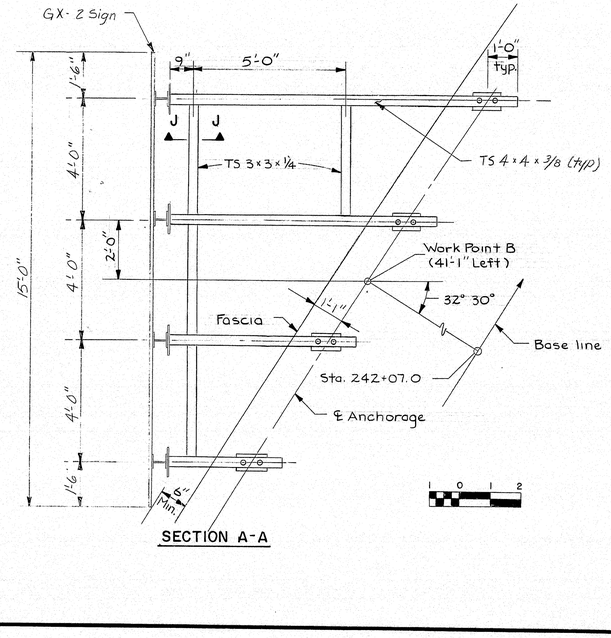


BRACKET ELEVATION



SECTION B-B

Notes:
For sign bracket notes see sht. 39. For additional notes see sht 36.
For Sections C-C, D-D, E-E, F-F, G-G, & J-J. See sht. 39.



SECTION A-A

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	TH	4/85
	CHECKED	TH	
	REVISIONS	JSM	
	FIELD CHANGES		

BRUNING 44-132-4570-1

102-239

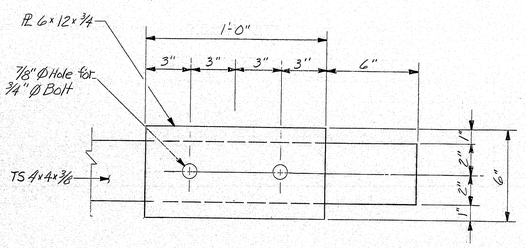
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

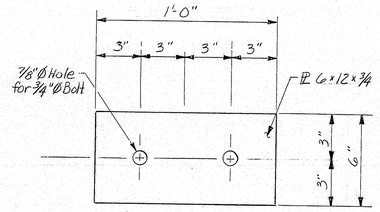
SIGN BRACKET

SHEET 38 OF 55 AUGUSTA, MAINE

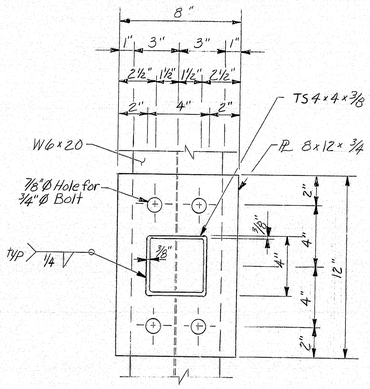
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	499	515



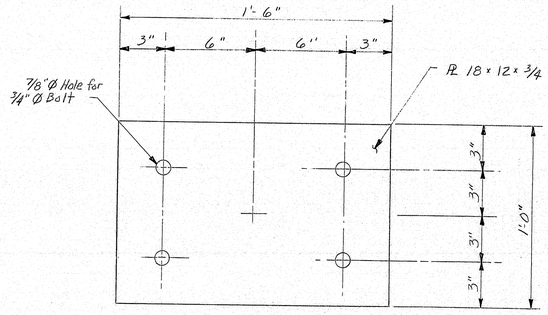
SECTION C-C



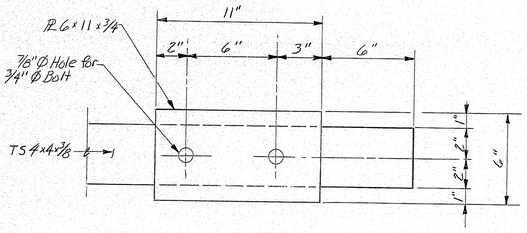
SECTION D-D



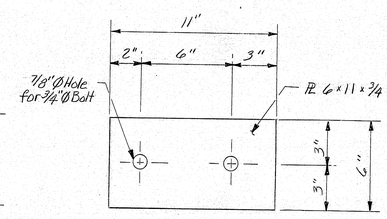
SECTION E-E



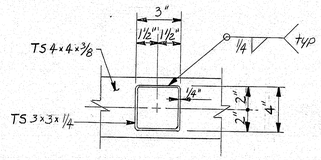
SECTION F-F



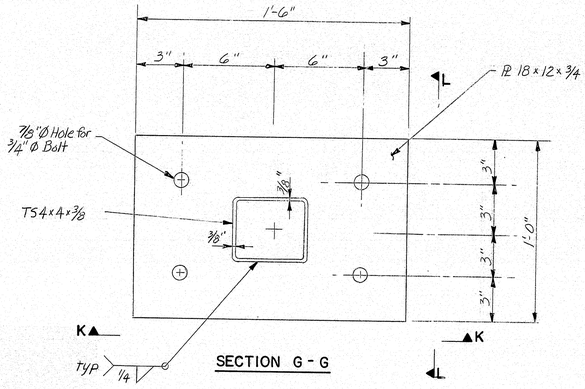
SECTION H-H



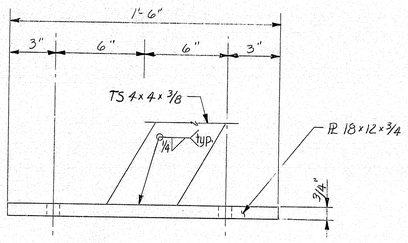
SECTION I-I



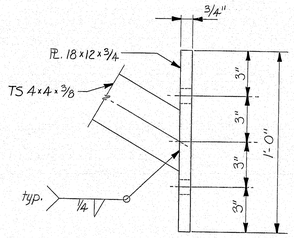
SECTION J-J



SECTION G-G



VIEW K-K



VIEW L-L

NOTES:

1. SIGN BRACKET DIMENSIONS NOT SHOWN ON THE PLANS SHALL BE DETERMINED BY THE CONTRACTOR, BASED ON SIGN SKEW ANGLE AND STRUCTURE GEOMETRY, SUBJECT TO THE APPROVAL OF THE ENGINEER.
2. HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325, TYPE 1.
3. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B.
4. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
5. PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND APPLICABLE REVISIONS AND SUPPLEMENTS.
6. FABRICATION OF THE SIGN BRACKETS SHALL BE IN CONFORMANCE WITH SECTION 504 OF THE STANDARD SPECIFICATIONS.
7. DETAILS FOR CONNECTION OF SIGN PANELS TO SIGN BRACKETS SHALL BE SUBMITTED BY CONTRACTOR FOR APPROVAL OF ENGINEER.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	TH	2-84
	CHECKED	TH	
	REVISIONS		
	FIELD CHANGES		

BRUNING 44-132 457101

102-240

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SIGN BRACKET

SHEET 39 OF 55 AUGUSTA, MAINE

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
FOOTING			
F521	28	28'-3"	Long. Top & Bott.
F535	51	3'-7"	Wing Wall, dowels
ABUTMENT			
A523	70	18'-9"	Front Wall, Vert.
A624	116	22'-0"	Back Wall, Vert.
A526	56	54'-8"	Back Wall, Horiz.
A1027	56	18'-6"	Front Wall, Vert.
A531	8	11'-6"	Vert.
A532	16	20'-9"	Side Wall, Vert.
A533	12	18'-9"	Side Wall, Vert.
A535	24	26'-6"	Bridge Seat, Horiz
A537	8	0'-9"	Curtain Wall, Vert.
A538	8	7'-9"	Curtain Wall, Vert.
A539	116	7'-10"	Back Wall, Vert.
A441	2	37'-8"	Paving Notch, Horiz
A442	2	51'-5"	Back Wall, Top, Horiz.
A545	8	3'-11"	Access Manhole
AW511	19	20'-5 1/2" to 26'-10"	N.F. Vert. Vary ea. by 4 1/4"
AW513	42	18'-2"	Horiz.
AW516	4	4'-7"	Horiz.
AW517	4	7'-5"	Horiz.
AW516	2	4'-7"	Horiz.
AW517	2	7'-5"	Horiz.
AW518	4	9'-1"	N.F. Horiz.
AW619	4	9'-5"	F.F. Horiz.
AW520	2	6'-0"	Horiz.
AW523	19	22'-4" to 25'-6 1/4"	N.F. Vert. Vary ea. by 2 1/8"

MARK	NO.	LENGTH	LOCATION
EAST WING			
AW1112	13	20'-5" to 26'-11"	F.F. Vert. Vary ea. by 6 1/2"
AW515	14	3'-8" to 8'-8"	Vertical Vary ea. by 10"
WEST WING			
AW1124	13	22'-4" to 25'-7"	F.F. Vert. Vary ea. by 3 1/4"
AW525	13	25'-10 1/2 to 28'-0"	N.F. Vert. Vary ea. by 2 1/8"
AW528	14	3'-8" to 7'-8"	Vertical Vary 2 ea. by 8"

MARK	NO.	LENGTH	LOCATION
FOOTING			
AW514	10	4'-0 to 15'-4"	Horiz. Vary 2 ea. by 2'-10"
AW518	4	9'-1"	N.F. Horiz.
AW619	4	9'-5"	F.F. Horiz.
AW520	2	6'-0"	Horiz.
ABUTMENT			
AW1128	13	25'-10 1/2 to 28'-0"	F.F. Vert. Vary ea. by 2 1/8"
AW529	44	31'-2"	Horiz.
AW530	10	4'-8" to 27'-0"	Horiz. Vary 2 ea. by 5'-7"

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
F922	57	16'-4"	SL	—	1'-7"	13'-2"	1'-7"			—				Trans. Bott.
F523	57	17'-6"	S	—	2'-2"	13'-2"	2'-2"			—				Trans. Top
F524	32	43'-11"	L	1'-11"	42'-0"									W. Wing. Long. T&B
F1125	47	20'-6"	S	—	2'-8"	15'-2"	2'-8"			—				W. Wing Trans. Top
F926	34	20'-6"	S	—	2'-8"	15'-2"	2'-8"			—				W. Wing Trans, T&B
F1027	24	20'-6"	SL	—	2'-8"	15'-2"	2'-8"			—				W. Wing Trans. Bott.
F528	28	23'-7"	L	1'-11"	21'-8"									E. Wing. Long. T&B
F929	42	18'-6"	S	—	2'-8"	13'-2"	2'-8"			—				E. Wing. Trans. T&B
F530	2	3'-0"	V				1'-6"	1'-6"			1'-0 3/4"			W. Corner, Top & Bot.
F531	28	30'-2"	L	1'-11"	28'-3"									Long. Top & Bott.
F532	98	5'-1"	L	4'-3"	10"									dowels
F633	116	5'-9"	L	4'-9"	1'-0"									Back Wall, dowels
F1034	56	8'-7"	L	6'-9"	1'-10"									Front Wall, dowels
F1136	39	11'-6"	L	9'-6"	2'-0"									Wing Wall, dowels
A525	68	27'-9"	V				26'-6"	1'-3"			1'-1 7/16"			Front Wall, Horiz.
A428	38	23'-5"	HB	4 1/2"	4'-8"	6'-8"	4'-8"	6'-8"		4 1/2"				Ties, Horiz.
A429	76	5'-8 1/2"	C	6"	4'-8"					6 1/2"				Ties, Horiz.
A430	30	19'-8"	EP	—	10"	5'-8"	6'-8"	5'-8"	10"					Side Wall, Horiz.
A534	76	10'-3"	SJ	10"	8'-7"	10"	—	—			7'-11 1/2"			Curtain Wall, Horiz.
A536	16	9'-5"	SJ	8'-7"	10"	—	—	—			7'-11 1/2"			Back Wall, E. Corner
A440	28	4'-8"	A	1'-3"	11"	6"	2'-0"				5 1/2"			Pedestal
A543	16	5'-8"	S	—	1'-6"	2'-8"	1'-6"			—				Back Wall, W. Corner
A444	28	4'-6"	A	1'-3"	11"	4"	2'-0"				7 3/4"			Bridge Seat, Trans.
A513	98	10'-6"	S	—	1'-2"	8'-2"	1'-2"			—				Paving Notch, Trans.
A516	38	4'-11"	B	10"	1'-8"	8"	1'-9"				1'-2 7/8"			Back Wall, Top, Trans.
A517	51	6'-2"	S	1'-6"	1'-3"	2'-2"	1'-3"			—				Rungs
A608	17	4'-0"	E			1'-6"	1'-0"	1'-6"						
AW1110	12	13'-6"	V				2'-0"	11'-6"			11'-6"			F.F. Vert.
AW521	2	29'-8"	F	1'-3"	27'-2"					1'-3"		25'-8"		Top
AW522	2	9'-10"	V				8'-7"	1'-3"			1'-1 3/16"			Bott.
AW1110	12	13'-6"	V				2'-0"	11'-6"			11'-6"			F.F. Vert.
AW522	2	9'-10"	V				8'-7"	1'-3"			1'-1 3/16"			Bott.
AW1127	13	15'-0"	V				2'-0"	13'-0"			12'-11 3/4"			F.F. Vert.
AW531	2	42'-3"	F	1'-3"	39'-3"					1'-3"	38'-8"			Top

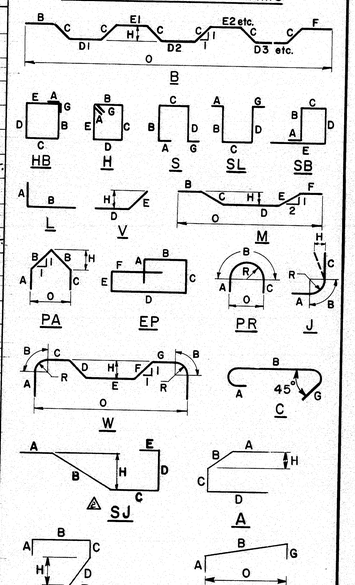
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

DATE	BY	DESIGN - DETAIL CHECKED REVISIONS FIELD CHANGES
7/86	SAC	
	MC	
	BSB	

PLANS

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	500	515

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar.
Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠
Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-241

REVISIONS	DATE
⚠ ⚠ New Bent Bar Type SJ Revised ACI Standard	9-26-88 5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

ABUTMENT NO. 1

AUGUSTA, MAINE

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
			FOOTING
F520	56	5'-8"	Wingwall Dowels
			ABUTMENT
A510	7	6'-7"	E. Curtain Wall
A511	7	8'-0"	W. Curtain Wall
A515	94	7'-10"	Backwall, Vert.
A418	2	34'-8"	Paving Notch, Long.
A419	4	46'-6"	Backwall, Top Long.
A521	Not	Used	
			WING WALL
AW801	28	12'-1"	E. Wall, Vert.
AW802	28	12'-6"	W. Wall, Vert.
AW503	28	12'-1"	E. Wall, Vert.
AW504	28	12'-6"	W. Wall, Vert.
AW505	54	27'-8"	Horiz.
C405	10	27'-8"	Curb, Long.
			BARRIER (Incidental to pay item 526.32. Not included in Item 503.14
BR409	9	27'-8"	Long.

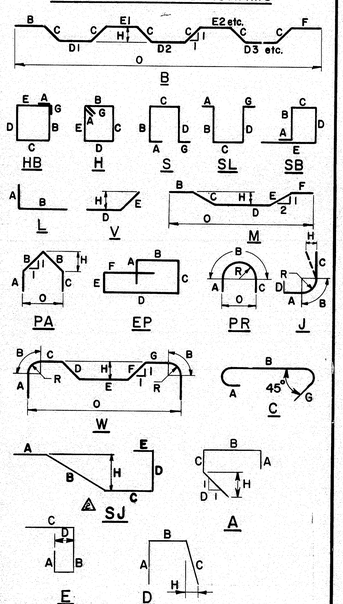
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
F511	48	28'-2"	L	1'-11"	26'-3"									Long. Top & Bott.
F512	35	16'-0"	S	1/2" —	2'-5"	11'-2"	2'-5"			1/2" —				Trans. Top
F813	35	13'-10"	S	1/2" —	1'-4"	11'-2"	1'-4"			1/2" —				Trans. Bott.
F514	18	13'-7"	L	2'-5"	11'-2"									Trans. Top
F815	18	12'-6"	L	1'-4"	11'-2"									Trans. Bott.
F516	36	29'-6"	L	1'-11"	27'-7"									Long. T & B
F717	54	10'-8"	S	1/2" —	1'-3"	8'-2"	1'-3"			1/2" —				Trans. Top
F518	54	13'-2"	S	1/2" —	2'-6"	8'-2"	2'-6"			1/2" —				Trans. Bott.
F819	56	8'-10"	L	7'-6"	1'-4"									Wing Wall Dowels
A501	74	8'-2"	L	7'-4"	10"									Front Wall, Vert.
A602	94	11'-8"	L	10'-8"	1'-0"									Back Wall, Vert.
A1003	52	9'-2"	L	7'-4"	1'-10"									Front Wall, Vert.
A504	14	10'-5"	L	9'-7"	10"									Curtain Wall, Vert.
A505	92	25'-4"	L	1'-2"	24'-2"									Long. Horiz.
A506	20	9'-10"	S	10"	8'-2"	10"	1/2" —			1/2" —				Sidewall, Horiz.
A407	10	20'-5"	BB	4 1/2"	4'-8"	5'-2"	4'-8"	5'-2"		4 1/2"				Ties, Horiz.
A408	20	5'-8 1/2"	C	6"	4'-8"					6 1/2"				Ties, Horiz.
A408A	10	6'-2 1/2"	C	6"	5'-2"					6 1/2"				Ties, Horiz.
A609	3	4'-0"	E	1/2" —	1/2" —	1'-6"	1'-0"	1'-6"						Rungs
A512	14	9'-0"	L	8'-2"	10"									Curtain Wall, Horiz
A513	88	10'-6"	S	1/2" —	1'-2"	8'-2"	1'-2"			1/2" —				Bridge Seat, Trans
A514	16	5'-8"	S	1/2" —	1'-6"	2'-8"	1'-6"			1/2" —				Pedestals
A516	35	4'-11"	A	10"	1'-8"	8"	1'-9"				1'-2 7/8"			Paving Notch, Trans.
A517	46	6'-2"	SB	1/2" —	1'-3"	2'-2"	1'-3"	1'-6"						Back Wall, Top Trans.
A520	9	2'-5"	SL	1/2" —	1/2" —	1/2" —	1'-7"			10"				Sidewalk & Curb Dwls
A522	8	4'-11"	J	1'-0 1/2"	7 1/2"	2'-8"	1'-9"						3"	Barner, Trans.
AW506	28	2'-8"	SL	1/2" —	1/2" —	1/2" —	1'-10"			10"				E. Wall Curb
C401	29	3'-11"	E	11"	1'-6"	1'-2"	4"							Curb, Trans.
C406	29	3'-11"	E	11"	1'-2"	1'-6"	4"							Curb, Trans
BR401	29	7'-0"	J	10"	2"	3'-0"	3'-0"				3"		1"	Batt. Trans.
BR402	29	6'-4"	D	3'-0"	3"	3'-1"					3"			Top, Trans.
BR410	29	1'-5"	L	6"	11"									Batt, Trans.
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

PLANS	DESIGN - DETAIL CHECKED REVISIONS FIELD CHANGES	BY	DATE
		MG	12/83
		SEC	
		ASH	

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	501	515

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠

Reinforcing Bar: ASTM A 615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-242

REVISIONS	DATE
⚠ New Bent Bar Type SJ	9-26-83
⚠ Revised ACI Standard	5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

ABUTMENT NO. 2

AUGUSTA, MAINE

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
F901	28	15'-8"	Trans. Bott.
F1102	31	27'-8"	Long. Bott.
F1003	31	27'-8"	" "
F504	50	15'-8"	Trans. Top & Bott.
F505	29	27'-8"	Long. Top & Bott.
P1101	40	31'-6"	Vert.
P1102	40	21'-10"	Vert.
F1003	62	27'-8"	Long. Bott.
F504	50	15'-8"	Trans. Top & Bott.
F505	29	27'-8"	Long. Top & Bott.
F806	28	15'-8"	Trans. Bott.
P1103	40	25'-10"	Vert.
P1104	40	16'-2"	Vert.

MARK	NO.	LENGTH	LOCATION
		PIER 1	
			FOOTING
			SHAFT
		PIER 2	
			FOOTING
			SHAFT

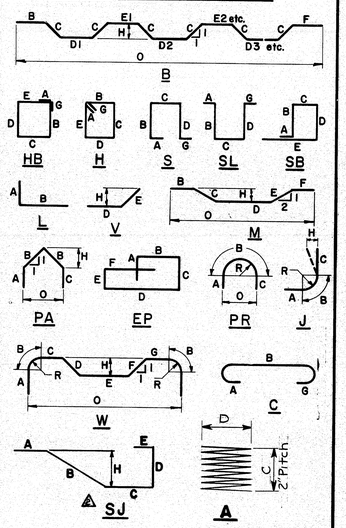
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
		1												
F1107	40	15'-8"	L	13'-8"	2'-0"									Dowels
F1108	40	25'-4"	L	23'-4"	2'-0"									Dowels
P405	1	2838'-11"	A			26'-9"	5'-6"							Spiral
		2												
F1109	40	15'-2"	L	13'-2"	2'-0"									Dowels
F1110	40	24'-10"	L	22'-10"	2'-0"									Dowels
P406	1	2181'-0"	A			20'-6"	5'-6"							Spiral
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

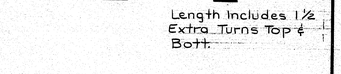
PLANS	BY	DATE
DESIGN - DETAIL	ACC	11/82
CHECKED	ESM	
REVISIONS		
FIELD CHANGES		

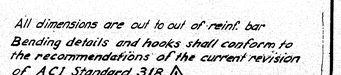
FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	502	515

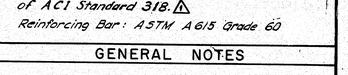
TYPE - BENDING DIAGRAMS

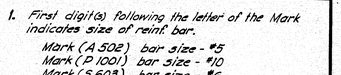


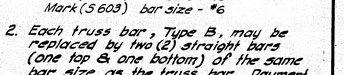
B











Length includes 1½ Extra Turns Top & Bott.

All dimensions are out to out of reinf. bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   - Mark (A 502) bar size - #5
   - Mark (P 1001) bar size - #10
   - Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-243

⚠	New Bent Bar Type SJ	9-26-83
⚠	Revised ACI Standard -	5-12-83
	REVISIONS	DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

PIERS 1&2

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
S501	168	46'-6"	Trans, Top
S503	168	15'-5"	Trans, Bott.
S509	272	30'-0"	Long. Top & Bott.
S511	68	29'-3"	Long. Top & Bott.
S556	8	6'-0"	Access M. H.
S557	3	10'-0"	Long. Sign W4-2
W501	120	30'-0"	Web 1 & 2, Long.
W506	12	27'-0"	Web 1, Long.
W507	12	35'-6"	Web 2, Long.
S507	168	13'-6"	Trans. Top
S509	94	30'-0"	Long. Top & Bott.
S512	24	37'-7"	Long. Top & Bott.

DECK

MARK	NO.	LENGTH	LOCATION
S513	68	40'-10"	Long. Top & Bott.

WEBS

MARK	NO.	LENGTH	LOCATION
W811	16	30'-0"	Web 1 & 2, Long.
W815	4	33'-6"	Web 1, Long.
W817	4	38'-0"	Web 2, Long.

BOTTOM SLAB

MARK	NO.	LENGTH	LOCATION
S510	24	26'-6"	Long. Top & Bott.

INTERMEDIATE DIAPHRAGM

MARK	NO.	LENGTH	LOCATION
D403	4	24'-6"	Horiz.
D404	4	23'-10"	Horiz.
D405	16	9'-9"	Horiz.
D406	4	21'-10"	Horiz.
D407	4	21'-2"	Horiz.

PIER CAPS

MARK	NO.	LENGTH	LOCATION
PC602	8	28'-0"	Top Horiz.
PC405	4	22'-10½"	Horiz.
PC403	4	24'-6"	Horiz.
PC406	4	22'-1"	Horiz.
PC404	4	23'-8"	Horiz.
PC407	4	21'-3"	Horiz.

BENT BARS

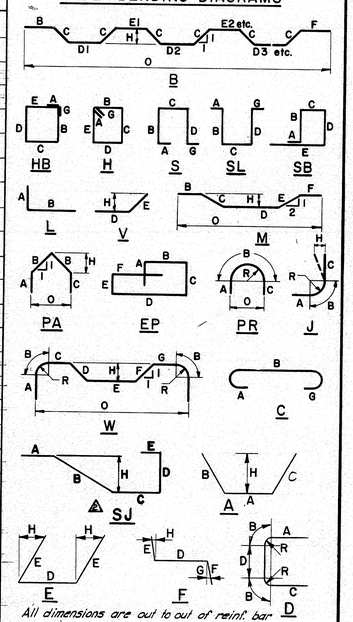
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
S502	336	16'-10"	V				10'-10"	6'-0"			11 7/8"			Trans., Bott.
S504	336	2'-8"	H	4"	6"	6"	6"	6"		4"				Trans. Ties
S505	168	3'-5"	SL	1'-2"	1'-3"	1'-0"	—			—				Curb dowels
W621	227	9'-3"	F				7'-3"	1'-0"	1'-0"	4 5/8"	4 5/8"			Web 2, Trans.
W622	227	9'-3"	E				7'-3"	1'-0"			4 5/8"			Web 2, Trans.
W623	305	12'-9"	F				7'-3"	1'-0"	4'-6"	1'-8 5/8"	4 5/8"			Web 2, Trans.
W624	227	9'-3"	E				7'-3"	1'-0"			3 1/2"			Web 1, Trans.
W625	305	12'-9"	F				7'-3"	1'-0"	4'-6"	1'-2 3/4"	3 1/4"			Web 1, Trans.
W626	227	9'-3"	F				7'-3"	1'-0"	1'-0"	3 1/4"	3 1/4"			Web 1, Trans.
W427	470	2'-3"	C	6"	1'-3"					6"				Duct Ties
W328	Not Used													
W329	162	4'-3 5/8"	PR	1'-6"	1'-0 5/8"	1'-9"						8"	4"	Duct Ties
W430	134	3'-3"	D	10"	6"	10"	7"						4"	Duct Ties
W431	53	5'-0"	D	1'-6"	6"	1'-9"	9"						4"	Duct Ties
S506	168	22'-2"	A	20'-6"	10"	10"	—				9 1/2"			Trans. Bott.
S508	336	7'-7"	V				6'-9"	10"			8 5/8"			Trans. Top
D501	48	9'-5"	S	—	1'-3"	6'-11"	1'-3"			—				Horiz. & Vert.
D502	4	7'-5"	EP	—	1'-6"	2'-0"	6"	2'-0"	1'-6"					Horiz. & Vert.
D508	8	6'-10 1/2"	PR	2'-6"	1'-10 1/2"	2'-6"						1'-8 3/4"	1'-5"	Access Hole
D409	20	3'-0"	S	—	1'-3"	6"	1'-3"			—				Access Hole
PC601	80	25'-10"	HB	1'-0"	6'-11"	5'-0"	6'-11"	5'-0"		1'-0"				Vert.
PC608	8	22'-4"	A	20'-4"	1'-0"	1'-0"					11 3/8"			Both. Horiz.
PC509	48	5'-10"	V				5'-0"	10"			9 1/4"			Outside Face
PC510	84	8'-2"	S	—	10"	6'-6"	10"			—				Horiz.
PC611	96	9'-3"	E				7'-3"	1'-0"			11 3/8"			Tendon Anchor
PC412	36	7'-3"	L	3'-0"	4'-3"									Tendon Anchor
PC513	96	7'-5"	S	—	10"	5'-9"	10"			—				Tendon Anchor
PC614	296	4'-9"	S	—	1'-0"	2'-9"	1'-0"			—				Tendon Anchor
PC415	88	7'-8"	V				5'-0"	2'-8"			2'-6 1/2"			Tendon Anchor
PC416	12	6'-6"	L	2'-0"	4'-0"									Tendon Anchor
PC517	32	5'-5"	S	—	10"	3'-9"	10"			—				Tendon Anchor

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

PLANS	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
BY	MG	SAC	BSH	
DATE	7/82			

FHWA REA. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	303	515

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-244

REVISIONS	DATE
⚠ New Bent Bar Type SJ	9-26-83
⚠ Revised ACI Standard	5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SUPERSTRUCTURE STAGE I

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
S501	130	46'-6"	Trans., Top
S503	127	15'-5"	Trans., Bott.
S509	68	30'-0"	Long. Top & Bott.
S515	68	40'-2"	Long. Top & Bott.
S549	2	48'-0"	End Beam, Top.
S550	6	8'-3"	End Beam, Top.
S556	8	6'-0"	Access M. H.
W501	72	30'-0"	Web 1 & 2, Long.
W502	12	15'-3"	Web 1, Long.
W503	12	19'-7"	Web 2, Long.
W504	12	34'-9"	Web 1, Long.
W505	12	38'-5"	Web 2, Long.
S507	127	13'-6"	Trans., Top
S509	24	30'-0"	Long., Top & Bott.
S514	24	37'-11"	Long., Top & Bott.
S516	48	29'-0"	Long., Top & Bott.
S518	24	21'-0"	Long., Top & Bott.
D513	8	24'-0"	Horiz.
D518	32	3'-2"	Horiz., Top & Bott.
D403	4	24'-6"	Horiz.
D404	4	23'-10"	Horiz.

MARK	NO.	LENGTH	LOCATION
S517	136	32'-3"	Long. Top & Bott.
S546	6	26'-9"	Long. Top & Bott.
S519	2	3'-8"	Long. Top & Bott.
↕	10½"	Increments	
S519		to S545	
S545	2	26'-0"	Long., Top & Bott.
S558	3	16'-0"	Long. Sign GX-1
S559	3	20'-0"	Long. Sign GX-2
W811	12	30'-0"	Web 1 & 2, Long.
W812	4	18'-3"	Web 1, Long.
W813	4	22'-7"	Web 2, Long.
W814	4	37'-9"	Web 1, Long.
W815	4	41'-5"	Web 2, Long.
D405	16	9'-9"	Horiz.
D406	4	21'-10"	Horiz.

MARK	NO.	LENGTH	LOCATION
			DECK SLAB
			WEBS
			BOTTOM SLAB
			END BEAM
D407	4	21'-2"	Horiz.

BENT BARS

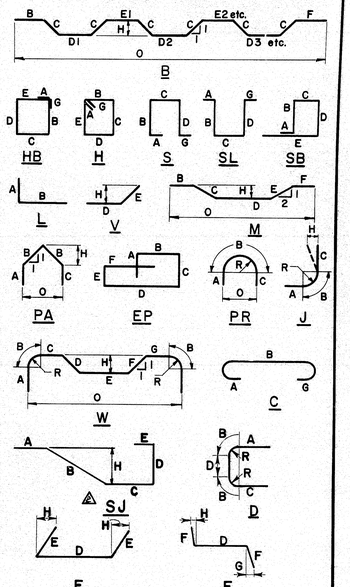
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
S502	254	16'-10"	V				10'-10"	6'-0"			11 7/8"			Trans., Bott.
S804	272	2'-8"	H	4"	6"	6"	6"	6"		4"				Trans., Ties
S505	136	3'-5"	SL	1'-2"	1'-8"	1'-0"	-			-				"
S551	11	5'-10"	SJ	-	1'-6"	1'-6"	1'-1"	1'-9"			1'-1"			End Beam, Top
S552	89	4'-4"	SL	-	1'-9"	1'-1"	1'-6"			-				End Beam, Top
W621	214	9'-8"	F				7'-8"	1'-0"	1'-0"	4 5/8"	4 5/8"			Web 2, Trans.
W622	214	9'-8"	E				7'-8"	1'-0"			4 5/8"			Web 2, Trans.
W623	272	12'-9"	F				7'-8"	1'-0"	4'-6"	1'-8⅜	4 5/8"			Web 2, Trans.
W624	214	9'-8"	E				7'-8"	1'-0"			3 1/4"			Web 1, Trans.
W625	272	12'-9"	F				7'-8"	1'-0"	4'-6"	1'-2¾	3 1/4"			Web 1, Trans.
W626	214	9'-8"	F				7'-8"	1'-0"	1'-0"	3 1/4"	3 1/4"			Web 1, Trans.
W427	348	2'-3"	C	6"	1'-8"					6"				Duct Ties
W480	93	3'-3"	D	10"	6"	10"	7"						4"	Duct Ties
W481	93	5'-0"	D	1'-6"	6"	1'-9"	9"						4"	Duct Ties
W479	82	4'-3 5/8"	PR	1'-6"	1'-0 5/8"	1'-9"						8"	4"	do
W428	82	2'-9"	PR	10"	1'-1"	10"						8"	4"	Duct Ties
S506	127	22'-2"	A	20'-6"		10"					9 1/2"			Trans., Bott.
S508	254	7'-7"	V				6'-9"	10"			8 5/8"			Trans. Top
D510	156	12'-4"	SL	-	4'-10"	2'-8"	4'-10"			-				Stirrups
D511	10	25'-7"	L	4'-10"	20'-9"									Top
D512	16	11'-6"	L	2'-6"	9'-0"									Horiz.
D514	8	23'-3"	L	2'-6"	20'-9"									Horiz.
D515	10	25'-1"	L	4'-4"	20'-9"									Bott.
D616	18	8'-9"	S	1'-0"	6'-9"	1'-0"	-			-				Anchor. Vert.
D517	57	4'-10"	S	-	10"	3'-2"	10"			-				Anchor. Horiz.
D419	30	4'-6"	SL	-	8"	3'-2"	8"			-				Tendon support
D520	64	5'-5"	S	-	10"	3'-9"	10"			-				Anchor. Horiz.
D621	56	8'-11"	S	1'-0"	6'-11"	1'-0"	-			-				Anchor. Vert.
D622	18	9'-8"	S	1'-0"	7'-8"	1'-0"	-			-				Anchor. Vert.
D501	48	9'-5"	S	-	1'-8"	6'-11"	1'-8"			-				Horiz. & Vert.
D502	4	7'-6"	EP	-	1'-6"	2'-0"	6"	2'-0"	1'-6"					Horiz. & Vert.
D508	4	6'-10½	PR	2'-6"	1'-10½	2'-6"						1'-8⅜	1'-5"	Access Hole
D409	20	3'-0"	S	-	1'-8"	6"	1'-8"							Access Hole

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

PLANS	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
BY	MC	BSA		
DATE	11/85			

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	504	515

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar.
Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠
Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-245

REVISIONS	DATE
⚠ New Bent Bar Type SJ	9-26-83
⚠ Revised ACI Standard	5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SUPERSTRUCTURE STAGE 2

SHEET 44 OF 55 AUGUSTA, MAINE

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
			DECK SLABS
S501	144	46'-6"	Trans., Top
S503	140	15'-5"	Trans., Bott.
S509	204	30'-0"	Long. Top & Bott.
S556	8	6'-0"	Access M. H.
			WEBS
W501	48	30'-0"	Web 1 & 2, Long.
W506	12	42'-3"	Web 1, Long.
W509	12	48'-0"	Web 2, Long.
			BOTTOM SLAB
S507	140	19'-6"	Trans., Top
S509	72	30'-0"	Long., Top & Bott.
S547	24	10'-1"	Long., Top & Bott.
			INTERMEDIATE DIAPHRAGM
D408	2	22'-6"	Horiz.
D404	2	23'-10"	Horiz.
D518	28	3'-2"	Horiz., Top & Bott.
D527	2	21'-8"	Horiz.
D405	8	9'-9"	Horiz.
D406	2	21'-10"	Horiz.
D528	2	21'-0"	Horiz.
			END BEAM
D401	2	21'-2"	Horiz.
D526	2	22'-4"	Horiz.

MARK	NO.	LENGTH	LOCATION
W511	8	30'-0"	Web 1 & 2, Long.
W518	4	45'-8"	Web 1, Long.
W519	4	51'-0"	Web 2, Long.

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
S502	280	10'-10"	V				10'-10"	6'-0"			11 7/8"			Trans., Bott.
S804	284	2'-8"	H	4"	6"	6"	6"	6"		4"				Trans., Ties
S505	144	3'-5"	SL	1'-2"	1'-8"	1'-0"								Stressing Anchor.
S551	8	5'-10"	SJ		1'-6"	1'-6"	1'-1"	1'-9"			1'-1"			End Beam, Top
S555	89	4'-4"	SL	-	1'-9"	1'-1"	1'-6"							End Beam, Top
W621	115	9'-3"	F				7'-8"	1'-0"	1'-0"	4 5/8"	4 5/8"			Web 2, Trans.
W622	115	9'-3"	E				7'-8"	1'-0"			4 5/8"			Web 2, Trans.
W623	185	12'-9"	F				7'-8"	1'-0"	4'-6"	1'-8 7/8"	4 5/8"			Web 2, Trans.
W624	115	9'-3"	E				7'-8"	1'-0"			5 1/4"			Web 1, Trans.
W625	185	12'-9"	F				7'-8"	1'-0"	4'-6"	1'-2 1/4"	5 1/4"			Web 1, Trans.
W626	115	9'-3"	E				7'-8"	1'-0"	1'-0"	5 1/4"	5 1/4"			Web 1, Trans.
W627	214	2'-8"	C	6"	1'-8"					6"				Duct Ties
W628	32	2'-9"	PR	10"	1'-1"	10"						8"	4"	Duct Ties
W631	61	5'-0"	D	1'-6"	6"	1'-9"	9"						4"	Duct Ties
W629	62	4'-3 5/8"	PR	1'-6"	1'-0 5/8"	1'-9"						8"	4"	Duct Ties
S506	140	22'-2"	A	20'-0"		10"					9 1/2"			Trans. Bott.
S508	280	7'-7"	V				6'-9"	10"			8 5/8"			Trans. Top
D501	24	9'-5"	S		1'-8"	6'-11"	1'-8"			-				Horiz. & Vert.
D502	2	7'-6"	EP	-	1'-6"	2'-0"	6"	2'-0"	1'-6"					Horiz. & Vert.
D508	4	6'-10 1/2"	PR	2'-6"	1'-10 1/2"	2'-6"						1'-8 3/4"	1'-5"	Access Hole
D409	10	3'-0"	S	-	1'-8"	6"	1'-8"			-				Access Hole
D616	18	8'-9"	S	1'-0"	6'-9"	1'-0"	-			-				Anchor, Vert.
D517	51	4'-10"	S		10"	3'-2"	10"			-				Anchor, Horiz.
D419	26	4'-6"	SL	-	8"	3'-2"	8"			-				Tendon Support
D622	18	9'-3"	S	1'-0"	7'-8"	1'-0"	-			-				Anchor, Vert.
D523	20	25'-1"	L	4'-10"	20'-8"									Top & Bott.
D524	152	12'-4"	SL	-	4'-10"	2'-8"	4'-10"							Stirrups
D529	8	22'-9"	L	2'-6"	20'-8"									Horiz.
D580	4	12'-1"	L	2'-6"	9'-7"									Horiz.
D581	4	12'-5"	L	2'-6"	9'-11"									Horiz.
D582	4	12'-9"	L	2'-6"	10'-3"									Horiz.
D588	4	13'-1"	L	2'-6"	10'-7"									Horiz.
D584	54	6'-5"	S	-	10"	4'-9"	10"			-				Anchor, Horiz.
D635	36	8'-11"	S	1'-0"	6'-11"	1'-0"								Anchor, Vert.

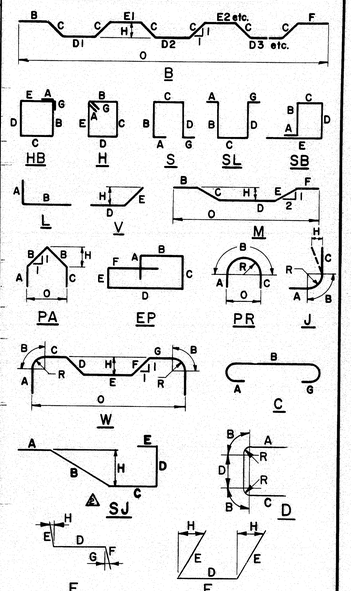
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

DESIGN - DETAIL	BY	DATE
CHECKED	MC	5/83
REVISIONS	SLC	12/83
FIELD CHANGES		

PLANS

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	505	55

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   - Mark (A 502) bar size - #5
   - Mark (P 1001) bar size - #10
   - Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-246

	REVISIONS	DATE
⚠2	New Bent Bar Type SJ	9-26-83
⚠1	Revised ACI Standard	5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SUPERSTRUCTURE STAGE 3

SHEET 45 OF 55 AUGUSTA, MAINE

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
C416	65	30'-0"	Long.
C517	4	30'-0"	Long.
C518	8	15'-0"	Long.
C419	5	5'-0"	Long.
C410	433	8'-6"	Sidewalk, Trans.
C512	8	30'-0"	Sidewalk, Long.
C413	138	30'-0"	Sidewalk, Long.
C514	8	10'-0"	Sidewalk, Long.
C415	6	6'-3"	Sidewalk, Long.
APPROACH SLAB			
AS400	32	30'-0"	
AS401	32	8'-6"	
AS600	140	15'-0"	

MARK	NO.	LENGTH	LOCATION
			CURB (RIGHT)
			SIDEWALK & CURB (LEFT)

MARK	NO.	LENGTH	LOCATION

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
C401	374	3'-11"	C	1'11	1'-6"	1'-2"	4'11							Trans.
C409	433	3'-10"	SJ	1'-4"	1'-6"	1'-0"	=	-			1'-6"			Sidewalk, Trans.
C411	433	3'-4"	C	1'-0"	1'-2"	1'-2"	3"							Curb, Trans.

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
EP401	10	1'-10"	End Post Dowels
EP405	8	1'-0"	End Post
EP508	4	4'-0"	End Post
EP407	12	3'-0"	End Post, Vert.
EP508	12	4'-0"	End Post
BR403	84	30'-0"	Longitudinal
BR404	6	25'-8"	Longitudinal
BR606	6	3'-1"	Abut. 1 End, Vert.
BR407	4	6'-0"	Abut. 1 End, Longit.
BR808	2	6'-0"	Abut. 1 End, Top

2 BAR END POST (RIGHT)

4 BAR END POST (LEFT)

BARRIER (INCIDENTAL TO PAY ITEM 526.32 NOT INCLUDED IN ITEM 503.14)

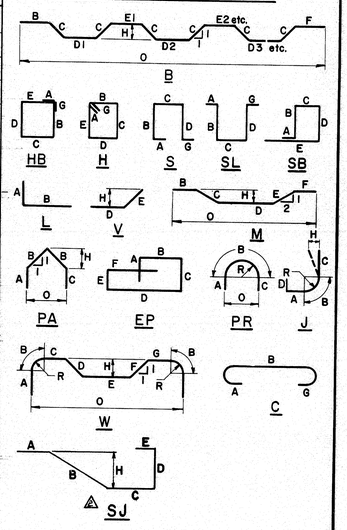
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
EP402	8	4'-9"	S		2'-1"	0'-7"	2'-1"			-				End Post
EP403	8	4'-9"	H	4"	1'-0"	1'-0"	1'-0"	1'-0"		4"				" "
EP404	8	3'-1"	S	-	1'-3"	0'-7"	1'-3"			-				" "
EP408	6	4'-3"	S	-	1'-10"	0'-7"	1'-10"			-				" "
EP409	4	4'-2"	S	-	1'-10"	0'-6"	1'-10"			-				" "
EP410	2	4'-6"	S	-	1'-10"	0'-10"	1'-10"			-				" "
EP501	4	5'-3"	V				3'-0"	2'-3"			4"			" "
EP502	3	4'-11"	S	-	1'-11"	0'-7"	1'-11"			6"				" "
EP503	2	4'-10"	S	-	1'-11"	0'-6"	1'-11"			6"				" "
EP504	1	6'-5"	H	5"	1'-11"	0'-10"	1'-11"	0'-10"		5"				" "
EP701	4	5'-3"	V				3'-0"	2'-3"			4"			" "
EP702	3	4'-11"	S	-	1'-11"	0'-7"	1'-11"			6"				" "
EP703	2	4'-10"	S	-	1'-11"	0'-6"	1'-11"			6"				" "
EP704	1	6'-5"	H	5"	1'-11"	0'-10"	1'-11"	0'-10"		5"				End Post
EP402	12	4'-9"	S	-	2'-1"	0'-7"	2'-1"			-				End Post
EP403	12	4'-5"	H	4"	1'-0"	0'-10"	1'-0"	0'-10"		4"				" "
EP406	4	4'-7"	S	-	2'-0"	0'-7"	2'-0"			-				" "
EP411	6	7'-8"	S	-	3'-7"	0'-7"	3'-7"			-				" "
EP412	4	7'-8"	S	-	3'-7"	0'-6"	3'-7"			-				" "
EP413	2	8'-0"	S	-	3'-7"	0'-10"	3'-7"			-				" "
EP414	6	3'-4"	L	2'-8"	0'-8"					-				End Post Dowels
EP501	12	5'-3"	V				3'-0"	2'-3"			4"			End Post
EP502	6	5'-7"	S	-	2'-3"	0'-7"	2'-3"			6"				" "
EP503	4	5'-6"	S	-	2'-3"	0'-6"	2'-3"			6"				" "
EP504	2	6'-5"	H	5"	1'-11"	0'-10"	1'-11"	0'-10"		5"				" "
BR401	420	7'-0 7/8"	J	0'-10"		3'-0"	3'-0"				3"		1 1/2"	Transv., Bott.
BR402	420	7'-6 1/4"	PR	3'-0"		3'-1"						4"	1 1/2"	Transv., Top
BR405	5	3'-9"	HB	0'-4 1/2"	0'-6"	1'-0"	0'-6"	1'-0"		4 1/2"				Abut. 1 End, Stirrups

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	507	515

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar.
Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318. ⚠
Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A502) bar size - #5
   Mark (P1001) bar size - #10
   Mark (S603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

102-248

	REVISIONS	DATE
⚠	New Bent Bar Type SJ	9-26-83
⚠	Revised ACI Standard	5-12-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

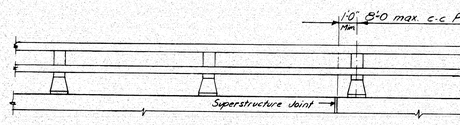
I-295 - PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. SOUTHBOUND RAMP

SUPERSTRUCTURE
END POST & BARRIER

SHEET 47 OF 55 AUGUSTA, MAINE

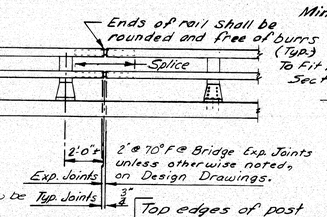
PLANS
DESIGN - DETAIL — BY — DATE
CHECKED — MC — 5/86
REVISIONS — SEC — 2/87
FIELD CHANGES — JSA

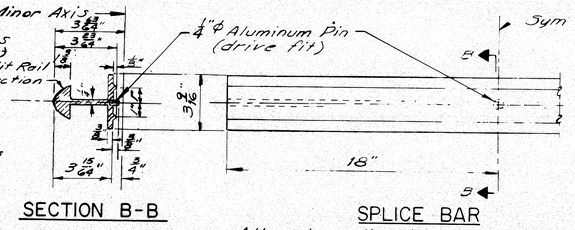
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(1100)50	508	515



RAILING - ELEVATION

Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.



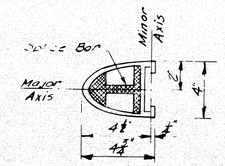


SECTION B-B

SPLICE BAR

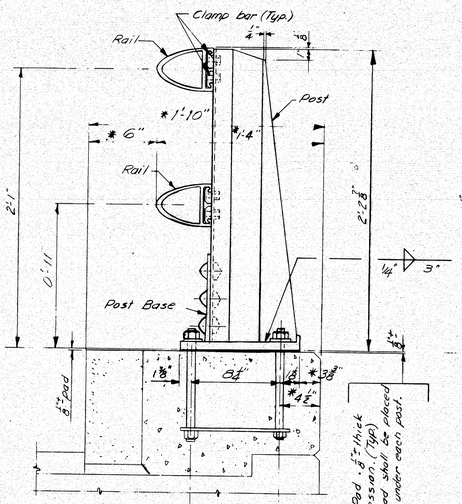
Alternate splice bars may be substituted if approved by the Engineer.

△3 If there is a conflict between this standard Detail and the Design Drawings, the requirements of the Design Drawings shall be followed.



RAIL SECTION

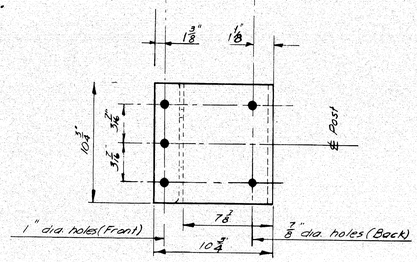
See "Rail Detail"



BRIDGE RAILING

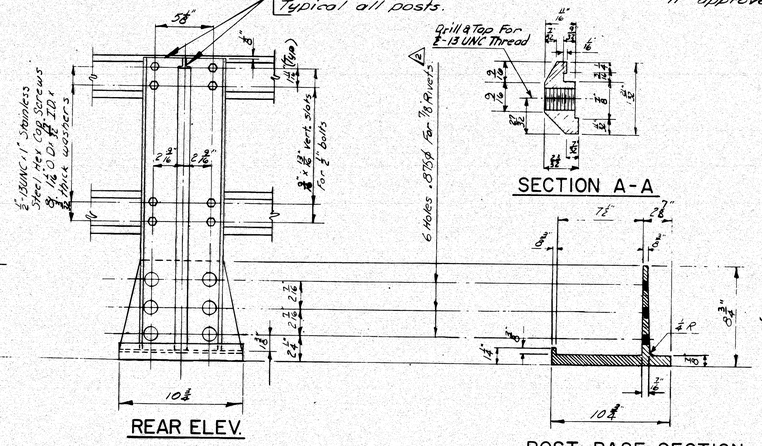
(Assembly)

* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



POST BASE △2

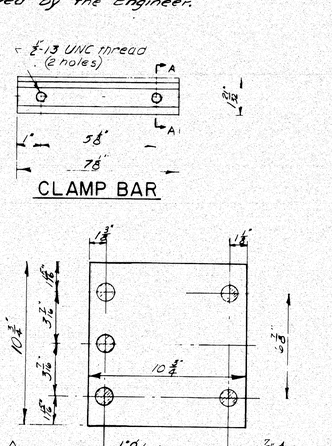
(Bottom View)



REAR ELEV.

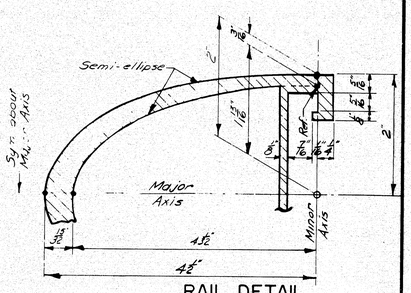
SECTION A-A

POST BASE SECTION △2

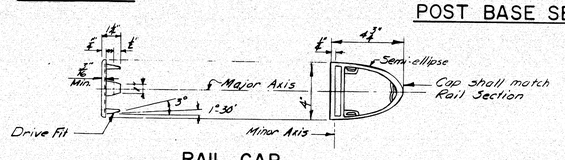


CLAMP BAR

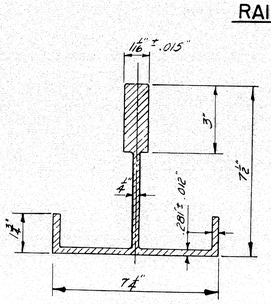
PREFORMED PAD △2



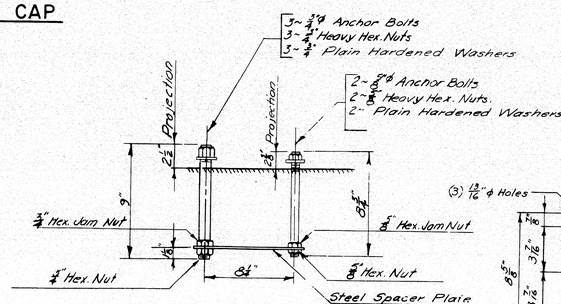
RAIL DETAIL



RAIL CAP

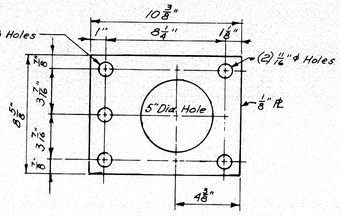


POST SECTION



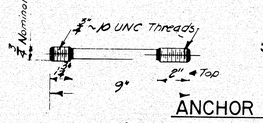
RAIL POST ANCHORAGE

(Assembly)



STEEL SPACER PLATE

(For Anchorage)



ANCHOR BOLTS

If cut threads are used, body diameter shall be not less than nominal diameter.
If rolled threads are used, body diameter shall be not less than pitch diameter of the threads.

BY	DATE
K. Woods & C. Leach	Jan. 1981

PLANS
DESIGN - DETAILED
CHECKED
REVISIONS
FIELD CHANGES

102-249

	REVISIONS	DATE
△3	Added Note	12-84
△2	Revised Post Base	8-84
△1	Altered base dimensions	7-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 114 - 81)

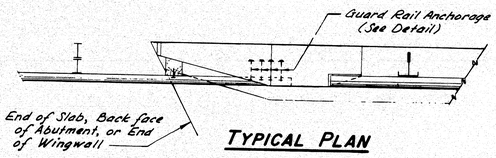
ALUMINUM BRIDGE RAILING
2 - BAR (SEMI-ELLIPSE)

SHEET 48 OF 55 AUGUSTA, MAINE JUNE 1981

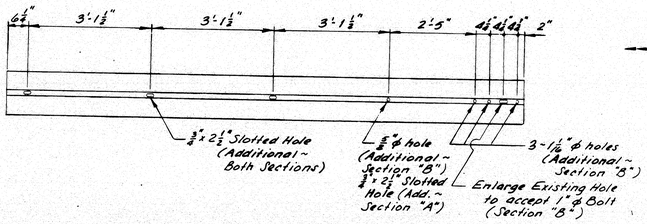
JANUARY 1988

203-1 2080

F.A.P. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	MAINE	IR-295-3(100)50	509	515

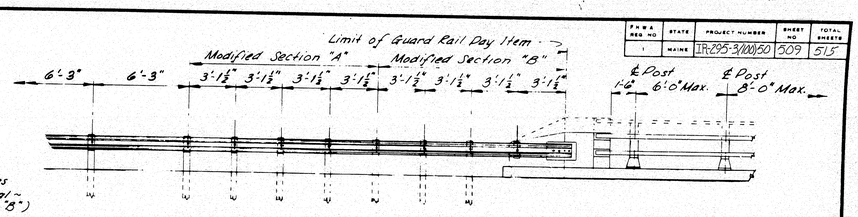


TYPICAL PLAN

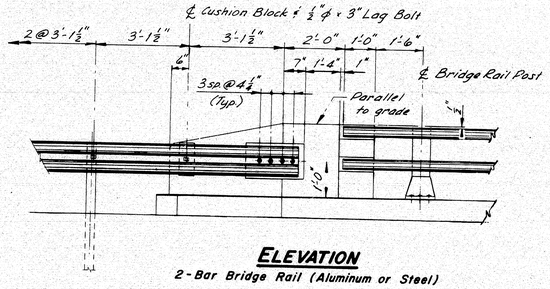


MODIFIED GUARD RAIL SECTIONS

(See Note #6)

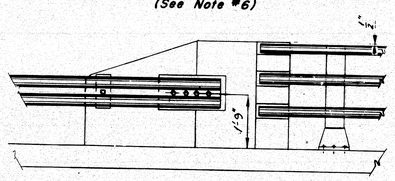


RAILING - ELEVATION



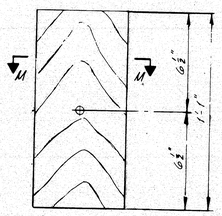
ELEVATION

2-Bar Bridge Rail (Aluminum or Steel)



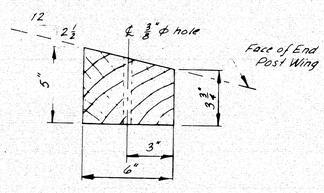
ELEVATION

3-Bar Bridge Rail (Aluminum or Steel)



CUSHION BLOCK

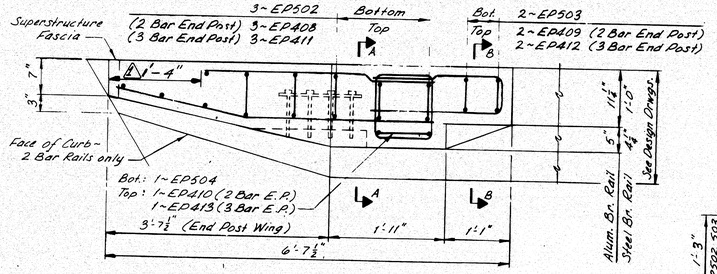
(See Note #7)



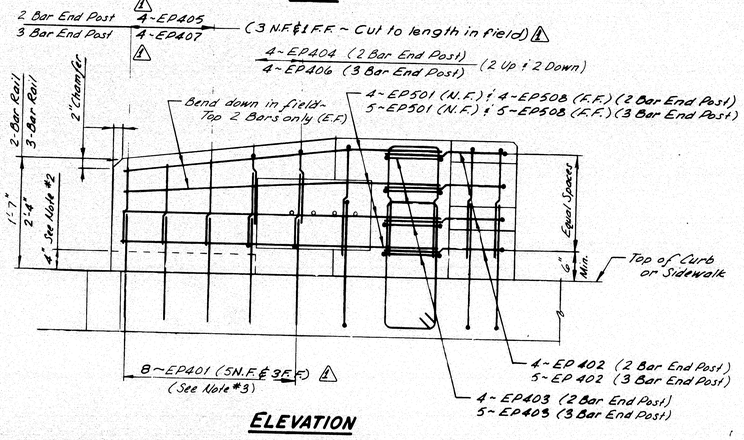
SECTION M-M

NOTES

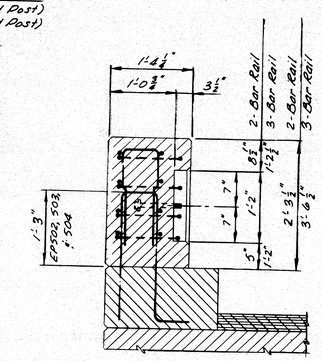
1. For locations of End Posts on the structure, see Design Drawings.
2. At times, an End Post Wing may be cantilevered for all or part of it's length. For details, see Design Drwgs.
3. If an End Post Wing is cantilevered, bars EP401 to be omitted as needed.
4. When End Post Wing is cantilevered more than 2'-0" all #5 bars shall be replaced by #7 bars.
5. Nuts for ⅞"ϕ anchor bolts shall be incidental to Guard Rail Pay Items. Nuts shall conform to A.S.T.M. A563, Grade DH, galvanized in accordance with A.S.T.M. A153, or Grade C3, plain.
6. Additional holes in the Modified Guard Rail Sections may be made by drilling, punching, or any other method that produces a neat, clean hole of the required size. Burning of holes will not be allowed.
7. Cushion Block material shall be as specified for Wood Posts in Subsection 710.07 (a). Payment for Cushion Blocks and Lag Bolts shall be incidental to the Guard Rail Pay Items.
8. Reinforcing Steel shall have 2" min. concrete cover.
9. After installation of Guard Rail is complete, upset the thread on the anchor bolts in three places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.
10. Guard Rail Anchorage shall be incidental to the applicable concrete pay item.
11. End Posts shall be constructed normal to grade unless otherwise shown on Design Drawings.
12. If there is a conflict between this Standard Detail and the Design Drawings, the requirements of the Design Drawings shall be followed.



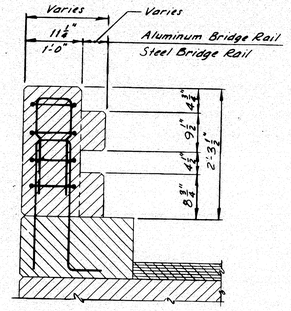
PLAN



ELEVATION

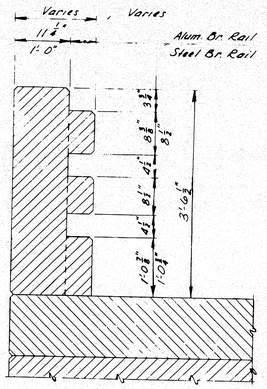


SECTION A-A



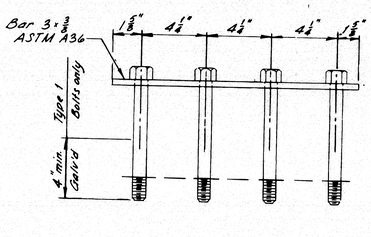
SECTION B-B

2-Bar Bridge Rail (Aluminum or Steel)

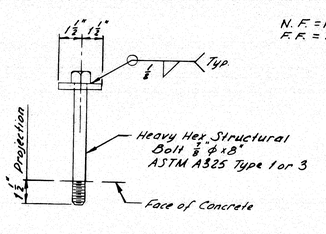


SECTION B-B

3-Bar Bridge Rail (Aluminum or Steel)



GUARD RAIL ANCHORAGE



VIEW N-N

LEGEND

N.F. = Near Face E.F. = Each Face
F.F. = Far Face

REVISIONS	DATE
1 General Revisions	1-83
2 Added Note # 12	1-85

102-250

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

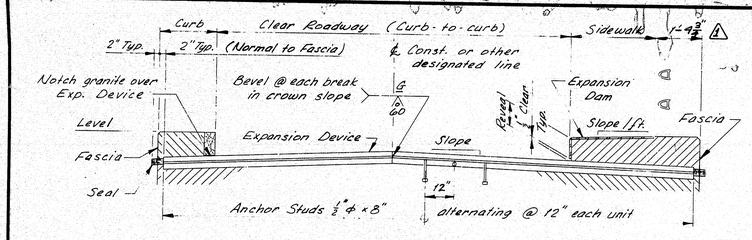
STANDARD DETAILS
(BD 120-81)

CONCRETE END POSTS

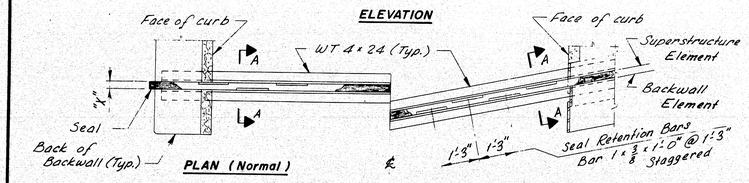
SHEET 49 OF 55 AUGUSTA, MAINE JUNE 1981

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	D. Damm Nov. '80
	CHECKED	
	REVISIONS	
	FIELD CHANGES	

BRUNING 44-132-45710

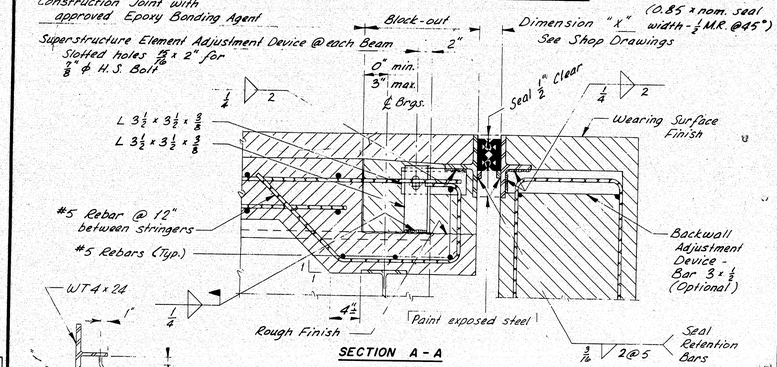


ELEVATION

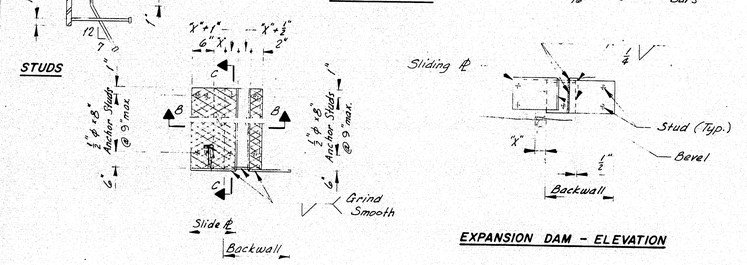


PLAN (Normal)

PLAN (Skewed)

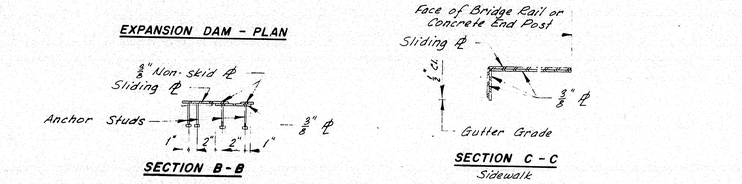


SECTION A-A

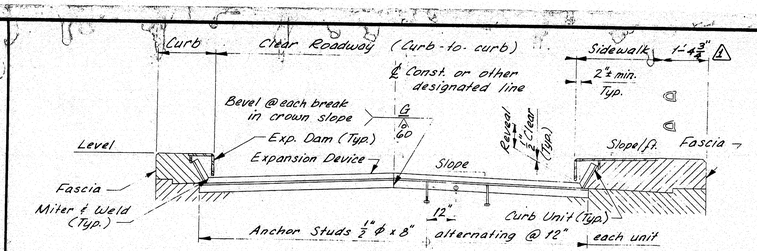


EXPANSION DAM - ELEVATION

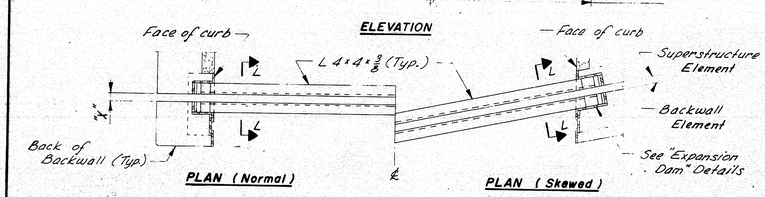
EXPANSION DAM - PLAN



COMPRESSION SEAL

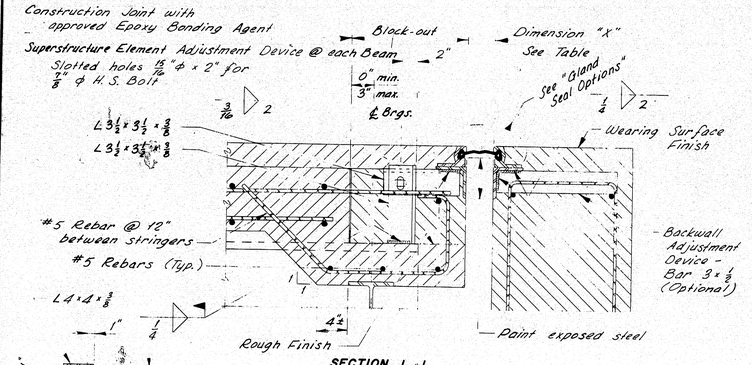


ELEVATION

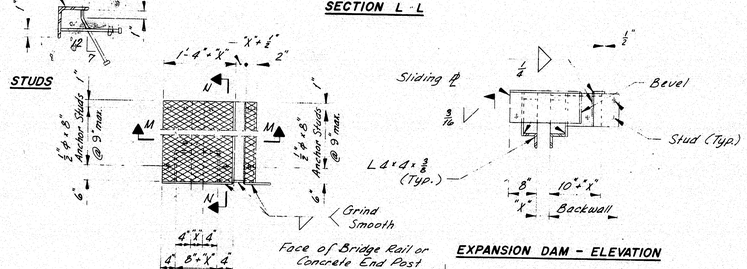


PLAN (Normal)

PLAN (Skewed)

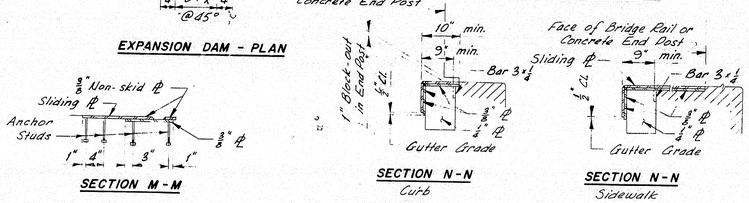


SECTION L-L



EXPANSION DAM - ELEVATION

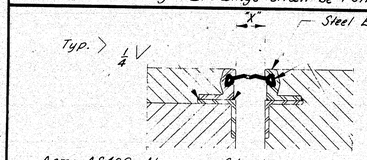
EXPANSION DAM - PLAN



GLAND SEAL

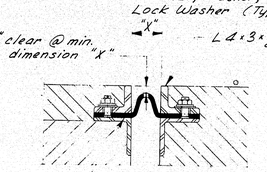
NOTES: (2)

1. Each Expansion Device Unit consists of one pair of matching Elements and Expansion Dams as required. At joints over Piers, two Superstructure Elements shall be used.
2. Welding to reinforcing steel will be allowed in the top 1'-6" of the Abutment backwall.
3. See Design Drawings for dimensions, slopes, skew, and all other information necessary to fabricate and install the units. Expansion Devices shall be installed normal to grade.
4. The concrete in the Superstructure Adjustment Device Block-out may be placed with the Sidewalk, and Curb Concrete.
5. (3) If there is a conflict between this Standard Detail and the Design Drawings the requirements of the Design Drawings shall be followed.



Acme AS400 Neoprene Gland or
Wabo-Maurer S400 Neoprene Gland

WITH STEEL EXTRUSION



Onflex 45 Neoprene Gland or
Bendoflex 450 Neoprene Gland

WITH STEEL ANGLE

GLAND SEAL OPTIONS

GLAND SEAL SETTING TABLE

Total Movement Required *	Dim. "X" (Measured parallel to ℄ of Roadway) TEMPERATURE (°F)									
	120°	105°	90°	75°	60°	45°	30°	15°	0°	-15°	-30°
1½"	1"	1⅛"	1¼"	1⅜"	1⅝"	1⅞"	2"	2⅛"	2⅜"	2⅝"	2¾"
2"	⅜"	1"	1⅛"	1⅜"	1½"	1⅝"	1⅞"	2"	2⅛"	2⅜"	2½"	2⅝"
2½"	½"	⅝"	¾"	1"	1¼"	1½"	1⅝"	1⅞"	2"	2⅛"	2⅜"	2½"
3"	½"	⅝"	¾"	1"	1⅛"	1¼"	1⅜"	1½"	1⅝"	1⅞"	2"	2⅛"

* Multiply expanding length of Superstructure, in feet, by .0125 in./ft.
Max. Dimension "X" allowed = 3½" @ -30°F

REVISIONS	DATE
Revised Title Block	7-82
(1) Revised dimension	1-83
(2) Revised Note #4	1-83
(3) Added Note #5	12-84

102-251

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

(BD 124 - 81)

(FOR USE WITH STRUCTURAL CONCRETE WEARING SURFACE)

EXPANSION DEVICE

COMPRESSION SEAL
GLAND SEAL

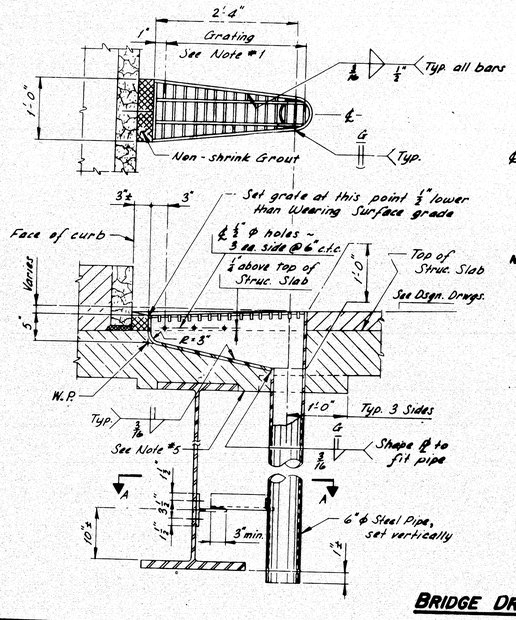
SHEET 50 OF 55 AUGUSTA, MAINE JUNE 1981

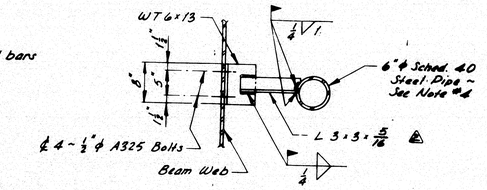
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	510	515

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	D. Dimmick	Aug. 81
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132-45710



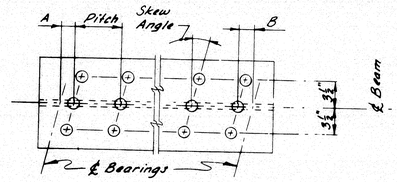


SECTION A-A

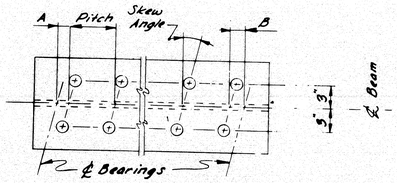
NOTES:

1. Grating shall be a commercial heavy-duty grating with 1⅛" x ⅜" bearing bars spaced at 2 3/16" c.t.c., and ½" ϕ cross bars spaced at 4" c.t.c.
2. Plates shall be A.S.T.M. A36, ½" thick.
3. WT 6x13 shall be of the same material as the beam web.
4. At the option of the Contractor, the Bridge Drain may be modified to allow the use of TS 6"x6"x¼" conforming to A.S.T.M. A501 or A.S.T.M. A500, Gr. "A", in place of the 6" ϕ steel pipe.
5. If the minimum thickness of concrete below the Drain is 2" or less, the haunch shall be extended as shown.
6. Painting will not be required when the structural steel is specified to be unpainted.
7. Payment for Bridge Drain shall be as specified under subsection 502.19 of the Standard Specifications.

BRIDGE DRAIN



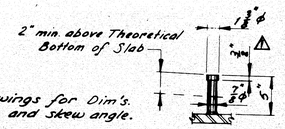
TRIPLE STUDS



DOUBLE STUDS

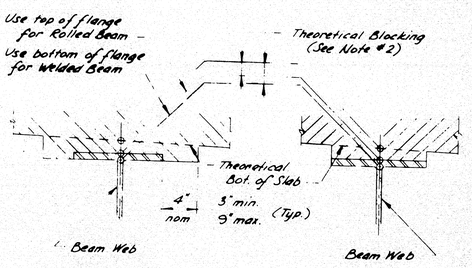
NOTE:

1. See Design Drawings for Dim's. "A", "B", stud pitch, and skew angle.



SHEAR CONNECTORS

PROJECT NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
-	MAINE	IR-295-3(100)50	511	515

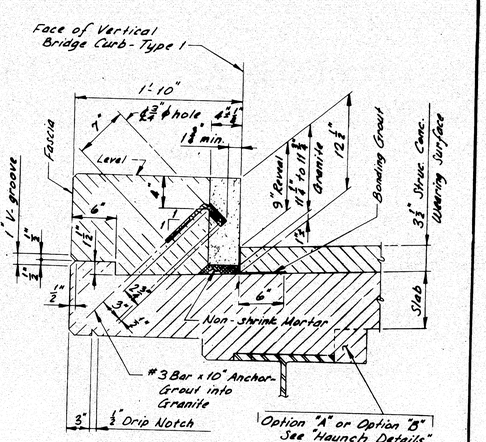


OPTION "A" OPTION "B"

NOTE:

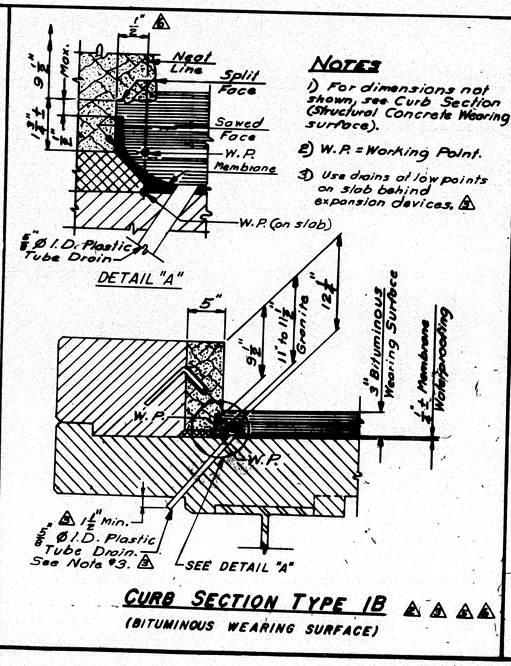
1. Haunch Option "A" or Option "B" may be used at the Contractor's discretion. Only one option shall be used on each structure, except that Option "A" must always be used on the fascia side of all fascia beams and on beams designed without shear connectors.
2. Theoretical Blocking shall be as indicated on Design Drawings.
3. Do not use Theoretical Blocking for setting of formwork.

HAUNCH DETAILS



CURB SECTION TYPE 1A ⚠ ⚠

(STRUCTURAL CONCRETE WEARING SURFACE)

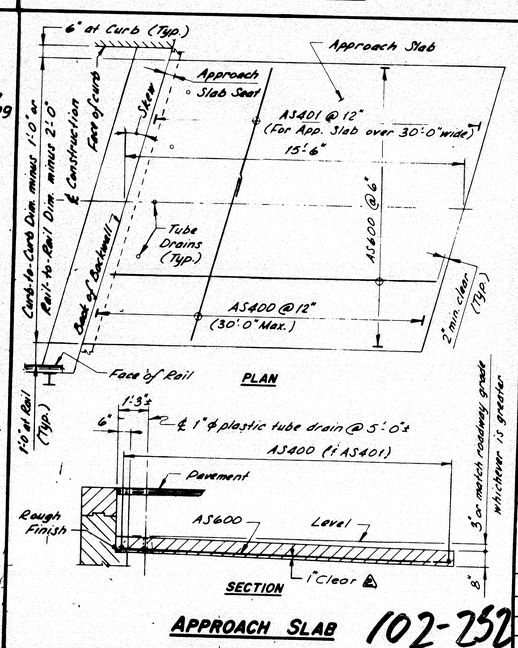


Notes

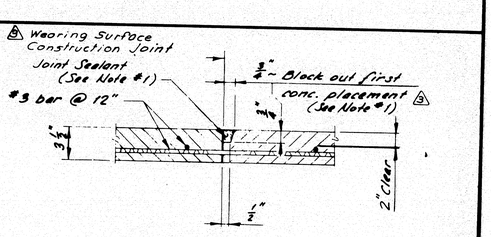
1) For dimensions not shown, see Curb Section (Structural Concrete Wearing surface).
2) W.P. = Working Point.
3) Use drains at low points on slab behind expansion devices. ⚠

CURB SECTION TYPE 1B ⚠ ⚠ ⚠ ⚠

(BITUMINOUS WEARING SURFACE)



APPROACH SLAB 102-252



STRUCTURAL CONCRETE WEARING SURFACE ⚠

NOTE:

⚠ 1. Use Block-out and Sealant only at Wearing Surface Construction Joints over Structural Slab Construction Joints. At all other joints, brush joint with neat cement paste before making adjacent concrete placement.

NOTE: ⚠ If there is a conflict between this Standard Detail and the Design Drawings, the requirements of the Design Drawings shall be followed.

PROJECT	DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	W. Bowers	Oct. '81
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

REVISIONS		DATE
⚠	Revised Stud Detail	3-82
⚠	Added Curb Section	7-82
⚠	Added Plastic Tube Drain & modified Structural Concrete Wearing Surface.	11-82
⚠	Revise Curb Anchorage	2-83
⚠	Revise Curb Title	6-83
⚠	Revise Curb Type 1B	11-83
⚠	Added Note	1-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 126 - 81)

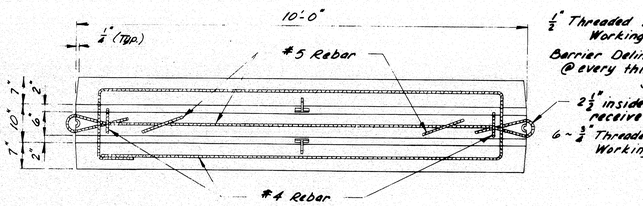
MISCELLANEOUS DETAILS

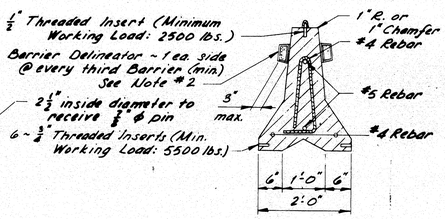
BRIDGE DRAIN - SHEAR CONNECTORS
STRUC. CONC. WEAR. SURFACE
CURB SECTION - APPROACH SLAB
HAUNCH DETAILS

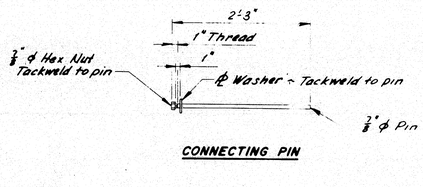
SHEET 51 OF 55 AUGUSTA, MAINE JUNE 1981

BRUNING 44-132-48710

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	MAINE	IR-295-3(100)52	512	515

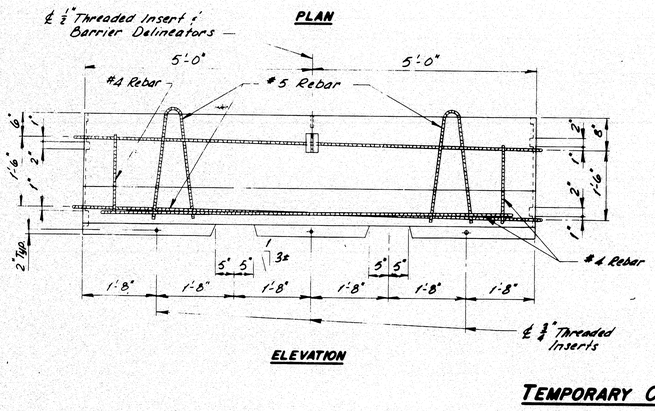


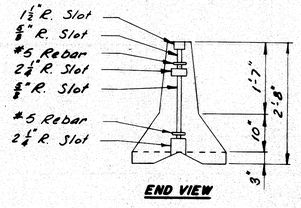




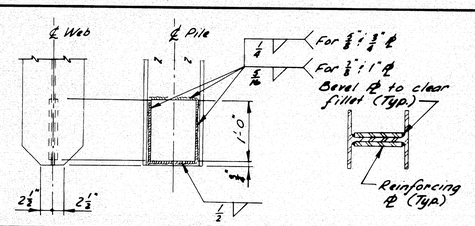
NOTES:

1. The reinforcing steel, end connections, lifting arrangement, and sizes and locations of hold-down inserts are advisory only. It shall be the Contractor's responsibility to provide adequate reinforcing, and connections, lifting points, and hold-down arrangements.
2. Barrier Delineators shall be bi-directional with a minimum effective reflex area of 8.0 square inches as approved by the Engineer. The Reflector shall preferably be of Methyl Methacrylate, and the Housing of Acrylonitrile Butadiene Styrene.





TEMPORARY CONCRETE BARRIER - TYPE 1

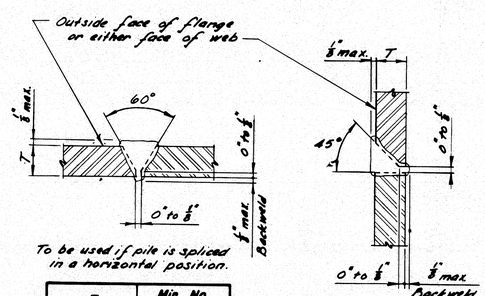


Pile Size	Reinf. ℄ Size	Pile Size	Reinf. ℄ Size
HP 10x42	8¾" x ⅝" x 1'-0"	HP 13x60 △1	11½" x ¾" x 1'-0"
HP 10x57	8¾" x ⅞" x 1'-0"	HP 13x73 △1	11½" x ⅞" x 1'-0"
HP 12x53	10¾" x ⅝" x 1'-0"	HP 13x87 △1	11½" x 1" x 1'-0"
HP 12x63	10¾" x ¾" x 1'-0"	HP 14x73	12½" x ⅞" x 1'-0"
HP 12x74	10¾" x ⅞" x 1'-0"	HP 14x89	12½" x 1" x 1'-0"

NOTES:

△1 1. At the Contractor's option, prefabricated cast steel pointed pile tips may be used in lieu of the reinforced pile tip shown, provided they have a cross-sectional area of 1½ times the area of the pile at a point ¾ inches above the bottom of the prefabricated tip, and are approved by the Engineer.
2. Plates may be shop or field welded.
3. Use Manual Shielded-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
4. Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.

POINTED REINFORCED PILE TIP

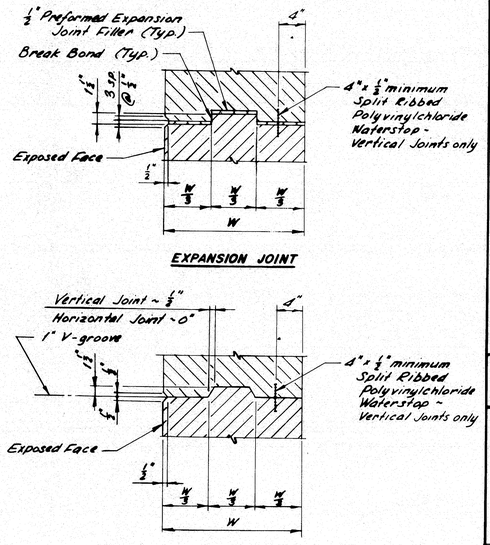


T	Min. No. Passes
3/16	3
1/4, 5/16, 3/8	4
7/16, 1/2	5

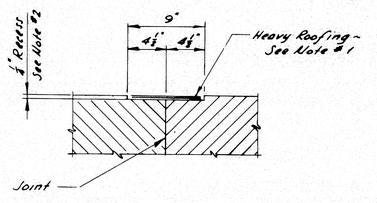
NOTES:

1. All cutting shall be done with the use of a mechanical guide.
2. Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
3. Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.
4. Gouge root before welding second side.

PILE SPLICE



CONCRETE JOINTS



NOTES: CONCRETE JOINT COVER

1. Where called for, cover horizontal and vertical construction, contraction, or expansion joints with two (2) 9" wide layers of heavy roofing felt. Coat the concrete and back of each layer as applied with plastic roofing cement.
2. Recess the covered area ½" unless otherwise indicated on Design Drawings.

NOTE: △2 If there is a conflict between this Standard Detail and the Design Drawings, the requirements of the Design Drawings shall be followed.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 127-81)

MISCELLANEOUS DETAILS

TEMP. CONC. BARRIER - TYPE 1
POINTED REINF. PILE TIP
PILE SPLICE - CONC. JOINTS
CONCRETE JOINT COVER

102-253

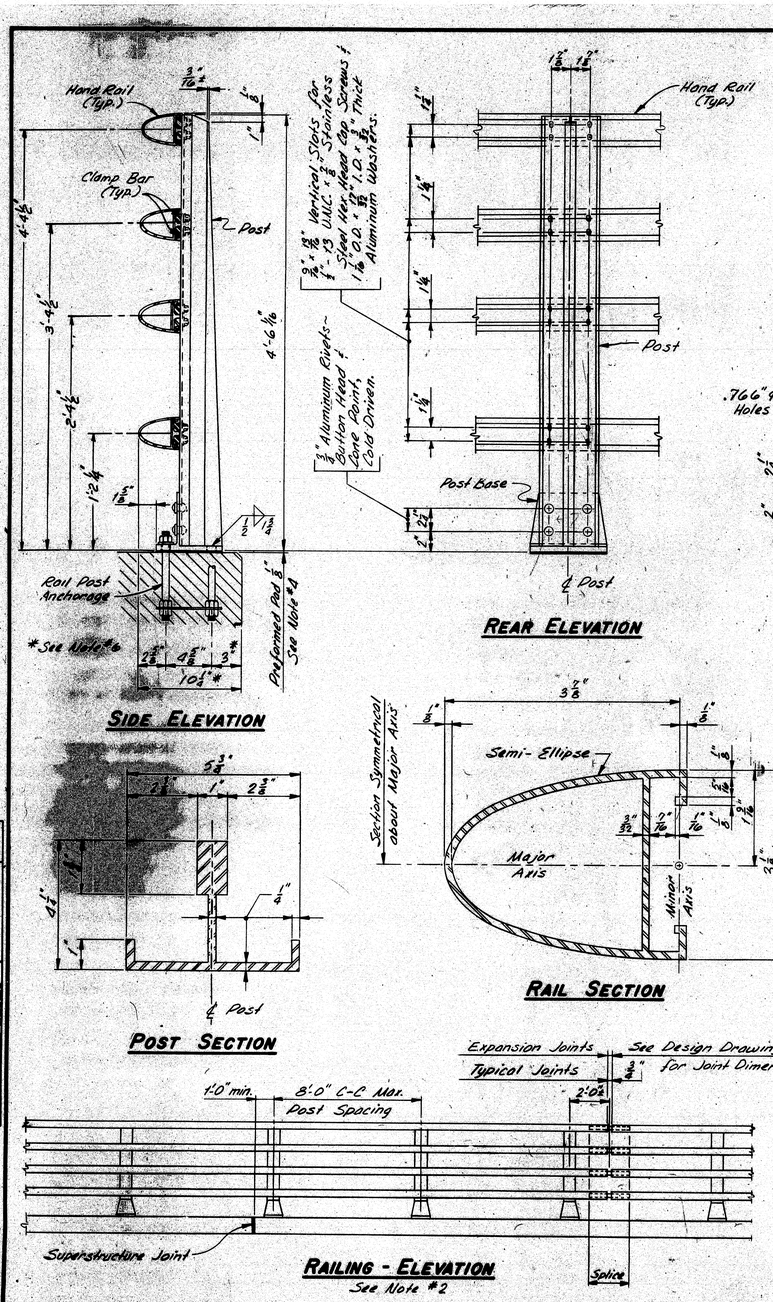
REVISIONS	Date
△3 Revd Pile Tip Note 1	1-86
△2 ADDED NOTE	1 85
△1 Added 13 HP's	7-83

SHEET 52 OF 55 AUGUSTA, MAINE JUNE 1981

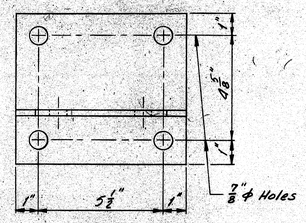
PROJECT DESIGN ENGINEER | BY | DATE
DESIGN - DETAILED
CHECKED
REVISIONS
FIELD CHANGES
PLANS

BRUNING 44-132 65710

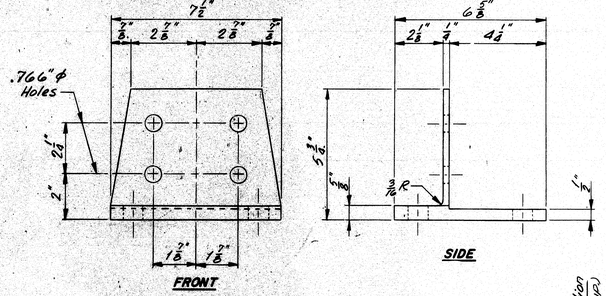
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-295-3(100)50	513	515



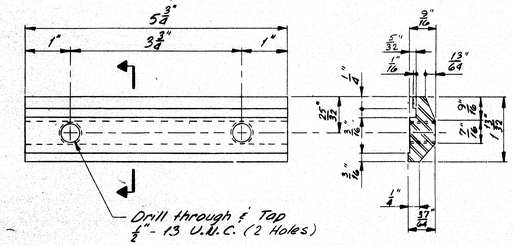
REAR ELEVATION



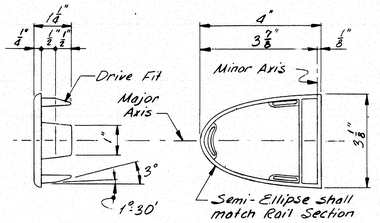
PLAN



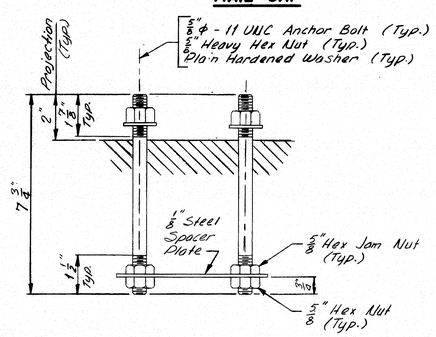
POST BASE DETAILS



CLAMP BAR & SECTION



RAIL CAP



RAIL POST ANCHORAGE
See Note #5

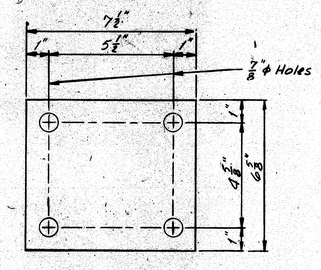
NOTES

1. Ends of Rails and top edges of Rail Posts shall be rounded and free of burrs.
2. Wherever possible, lengths of Rail shall be attached to at least four (4) Rail Posts, but never to less than two (2). Rail Posts shall be set normal to grade unless otherwise indicated on Design Drawings.
3. Alternate Splice Bar Designs may be substituted, if approved by the Engineer.
4. Preformed Pads shall be 5/8" thick after compression. At least one pad shall be placed under each Rail Post Base.
5. If anchor bolts are to have cut threads, body diameter shall be not less than the nominal diameter. If rolled threads are used, body diameter shall be not less than the pitch diameter of the threads.
6. Asterisk (*) indicates preferable minimum dimensions. For actual dimensions, see Design Drawings.
7. ⚠ If there is a conflict between this Standard Detail and the Design Drawings, the Design Drawings shall be followed.

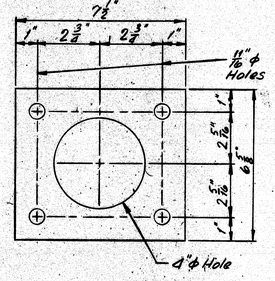
SIDE ELEVATION

POST SECTION

RAIL SECTION

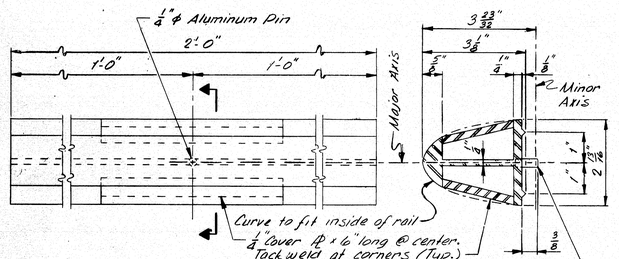


PREFORMED PAD



STEEL SPACER PLATE

RAILING - ELEVATION
See Note #2



RAIL SPLICE BAR & SECTION
See Note #3

PROJECT ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED: J. Kendall Dawson	Jan. 85
	CHECKED:	
	REVISIONS:	
	FIELD CHANGES:	

⚠	102-254	
⚠	Added Note No. 7	1-30-85
	REVISION	DATE

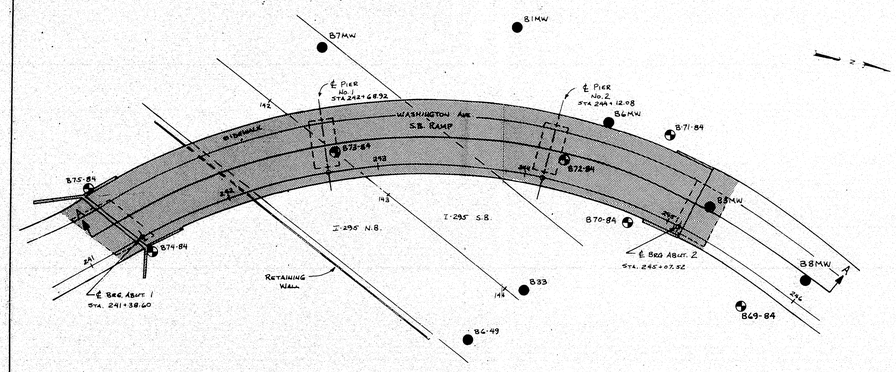
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 129-83)

ALUMINUM BRIDGE RAILING
BICYCLE RAILING

SHEET 53 OF 55 AUGUSTA, MAINE DEC. 1983

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-295-3(100)S0	514	515



LEGEND:

B4-49 — DESIGNATION AND APPROXIMATE LOCATION OF PREVIOUS TEST BORING

B74-84 — DESIGNATION AND APPROXIMATE LOCATION OF DESIGN-PHASE BORING

A — SUBSURFACE PROFILE ORIENTATION

NOTES:

1. BASE PLAN PREPARED FROM DRAWING ENTITLED "WASHINGTON AVE. S.B. RAMP STRUCTURE OVER I-295 SOUTH OF TUKEY'S BRIDGE PORTLAND, MAINE, I-SWIR-295-3(97), PRELIMINARY PLAN" DATED MAY 1985, PREPARED BY TT LIN INTERNATIONAL. APPROXIMATE BORING LOCATIONS WERE ADDED BY HALEY & ALDRICH.
2. PREVIOUS BORING LOCATIONS TAKEN FROM MDOT CONTRACT DRAWINGS.
3. DESIGN-PHASE BORINGS MONITORED PART-TIME BY HALEY & ALDRICH, INC.
4. PLAN DOES NOT INDICATE EXISTING BRIDGES, EMBANKMENTS, ROADWAYS OR UNDERGROUND UTILITIES.
5. PLAN IS INTENDED ONLY TO SHOW APPROXIMATE LOCATIONS OF TEST BORINGS IN RELATION TO PROPOSED BRIDGES.

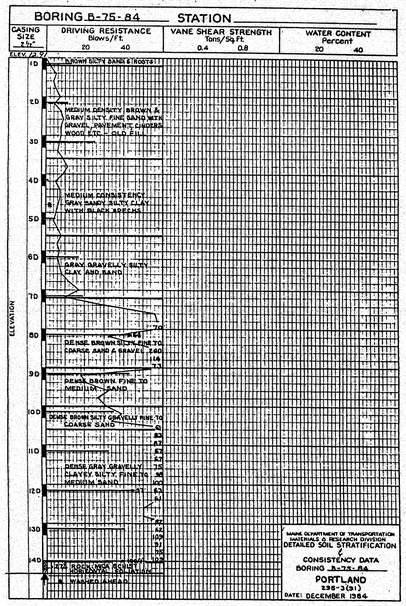
0 10 20 30 40
SCALE IN FEET

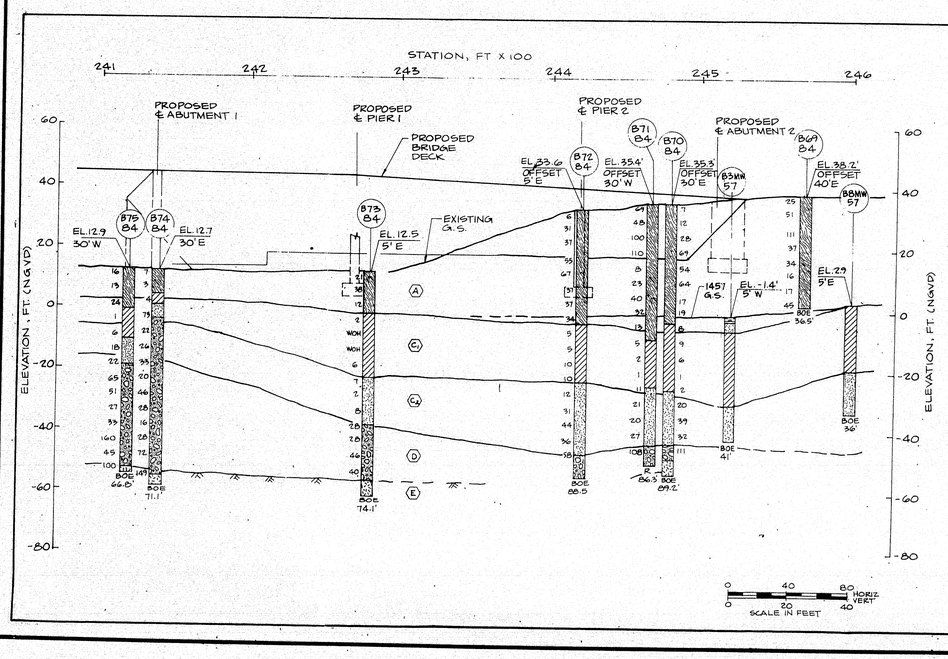
HALEY & ALDRICH, INC. PORTLAND, MAINE
CONSULTING GEOTECHNICAL ENGINEERS, GEOLOGISTS AND HYDROGEOLOGISTS

PROPOSED WASHINGTON AVE. S.B. RAMP STRUCTURE
I-295 INTERCHANGE COMPLEX
PORTLAND, MAINE

EXPLORATION LOCATION PLAN

SCALE: AS SHOWN — NOVEMBER 1985





0 40 80 HORIZ.
0 20 40 VERT.
SCALE IN FEET

LEGEND:

B1-84 — BOREHOLE DESIGNATION - YEAR BORING PROGRAM INITIATED

EL. 99.9 (APPROX) — GROUND SURFACE ELEVATION

7 — BORING OFFSET (EAST OR WEST) FROM PROFILE CENTERLINE

WOH / 7/1 — HAMMER BLOWS REQUIRED TO DRIVE SPLIT-SPOON SAMPLER 12 INCHES FOLLOWING 6 INCH SEATING DRIVE. (NOTE: WEIGHT AND FALL OF HAMMER MAY VARY. TYPICALLY 350 FT.-LBS. OF ENERGY PER BLOW)

SAMPLER SUNK 12 INCHES BY WEIGHT OF HAMMER WITHOUT DRIVING

B4-84 — LOCATION AND DESIGNATION OF 2 INCH O.D. TUBE SAMPLE

WATER LEVEL MEASURED IN BOREHOLE (MHW = NEAR HIGH WATER, MLW = NEAR LOW WATER).

BOE — BOTTOM OF EXPLORATION

R — REFUSAL

18' — DEPTH TO BOE OR R

SOIL OR ROCK UNIT	GRAPHIC SYMBOL	GENERAL DESCRIPTION
A		FILL
B		ORGANIC DEPOSITS
C1, C2		MARINE SEDIMENTS - COHESIVE
C3, C4		MARINE SEDIMENTS - GRANULAR
D		GLACIAL TILL
E		BEDROCK

NOTES:

1. SEE FIGURE 1 FOR PROFILE ORIENTATION.
2. SEE BORING LOGS AND REPORT TEXT FOR SPECIFIC SOIL OR ROCK SAMPLE DESCRIPTIONS.
3. PROFILES ARE PRESENTED FOR GENERAL INDICATION OF SUBSURFACE CONDITIONS. ACTUAL CONDITIONS WILL VARY BETWEEN EXPLORATION LOCATIONS.

HALEY & ALDRICH, INC. PORTLAND, MAINE
CONSULTING GEOTECHNICAL ENGINEERS, GEOLOGISTS AND HYDROGEOLOGISTS

PROPOSED WASHINGTON AVE. S.B. RAMP STRUCTURE
I-295 INTERCHANGE COMPLEX
PORTLAND, MAINE

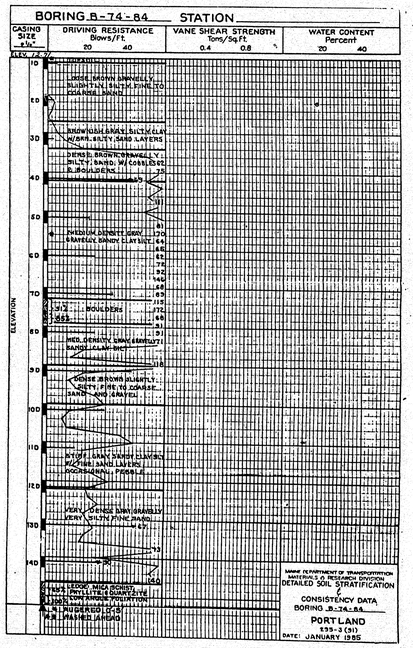
SUBSURFACE PROFILE A-A

SCALE: AS SHOWN — AUGUST 1985

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132 45710-1



NOTES

1. BORING LOCATION PLAN, AND SOIL-PROFILES WERE TAKEN FROM "REPORT ON PROPOSED WASHINGTON AVE. SOUTHBOUND RAMP, I-295 INTERCHANGE PROJECT, PORTLAND, MAINE" PREPARED BY HALEY & ALDRICH, INC. AND DATED 22 NOVEMBER 1985.
2. REFER TO THE ABOVE REFERENCED GEOTECHNICAL REPORT FOR DISCUSSION OF SUBSURFACE CONDITIONS AND FOUNDATION CONSTRUCTION CONSIDERATIONS.
3. TEST BORING LOGS PREPARED BY MATERIAL & RESEARCH DIVISION, MAINE DEPARTMENT OF TRANSPORTATION.
4. BORINGS DRILLED PRIOR TO 1984 REPRESENT GROUND SURFACE ELEVATIONS AND SUBSURFACE STRATIFICATIONS WHICH EXISTED AT THE TIME OF DRILLING.

102-255

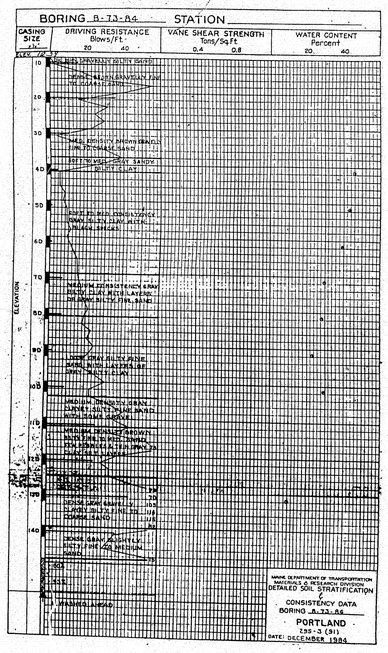
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

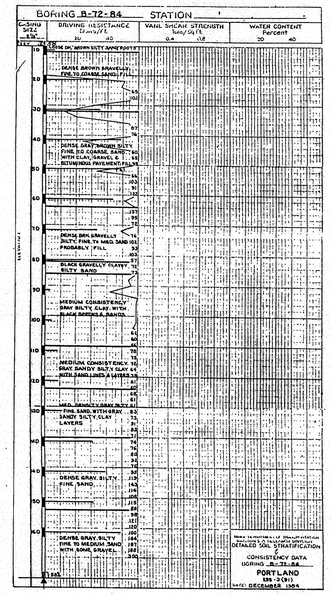
I-295 PORTLAND
CUMBERLAND COUNTY
WASHINGTON AVE. S.B. RAMP

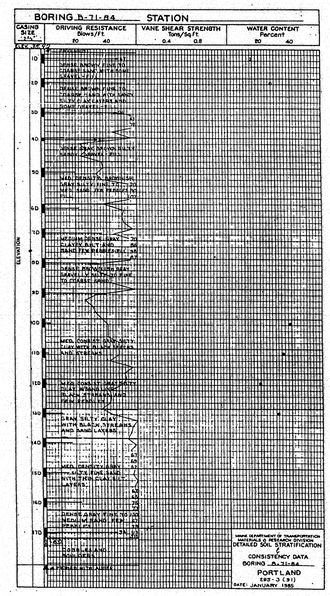
SUBSURFACE SOILS DATA

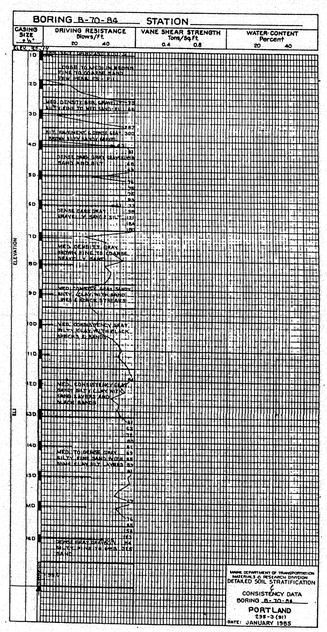
SHEET 54 OF 55 AUGUSTA, MAINE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-295-3(108)50	515	515








BORING B-70-84 STATION
CASING SIZE 2 1/2"
DRIVING RESISTANCE Blows/Ft.
VANE SHEAR STRENGTH Tons/Sq.Ft.
WATER CONTENT Percent
ELEVATION
MEDIUM CONSISTENCY GRAY SILTY CLAY WITH SAND LAYERS